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ABSTRACT

The nature and quality of the school-industry programs through which year 11 and year 12 Australian students incorporate periods of learning in the workplace into their senior school studies were examined to identify differences between the programs offered in Australia's various states and territories. The study was based primarily on data gathered in the 1996 national survey of school-industry programs conducted by the Australian Council for Educational Research. Despite the existence of national modules, marked differences were discovered in how individual states and states and territories interpret students' needs as they develop toward occupational competence and in how the workplace is used to meet those needs. Within individual industries, typical lengths of work placements varied widely by state. Significant gaps in provision of school-industry programs in relation to young people's job opportunities were found in many states. It was concluded that many of the differences identified have less to do with students' needs or employers' preferences than with the circumstances, traditions, and territorial imperatives of state and territorial education systems. It was recommended that the differences between Australia's states approach school-industry programs and vocational education be reduced. (Eighteen tables/figures are included. Appended are additional 16 tables/figures.) (MN)

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School-Industry Programs

Some Comparisons Between the States and Territories

Dusseldorp Skills Forum

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September 1997

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Executive summary

This report looks at differences between the States and Territories in the character and quality of school-industry programs, through which Year 11 and 12 students incorporate periods of learning in the workplace into their senior school studies. School-industry programs are important in Australia's attempts to improve the employment opportunities and skills base of its youth. In part this is because of the failure of other forms of initial vocational preparation to show substantial growth in the 1990s, but also because of the importance that international and Australian evidence attaches to workplace learning and to partnerships between schools and employers in building high quality work force skills and in motivating students to achieve.

A detailed analysis of data gathered through the 1996 Australian Council for Educational Research national survey of school-industry programs shows that in almost every facet of the organisation and delivery of programs sharp differences between the States are evident, with confusion about the most effective ways in which the workplace should be used to prepare young people for work being widespread.

- Marked differences exist in the ways that the needs of students as they develop towards occupational competence have been interpreted, and in the use that is made of the workplace in meeting these needs. In particular confusion exists about whether it is most appropriate for senior school students to take part in a broad generic orientation towards work and employment, or whether it is most appropriate for them to undertake a more focused preparation for particular occupational and industry pathways.
- Within individual industries the typical length of work placements differs widely from State to State, as do assessment practices, despite the existence of national modules as a basis for course content.
- In many States there are significant gaps in the provision of school-industry programs in relation to young peoples' job opportunities.
- Differences between the States are sharp in the ways that programs relate to the workplace and to employers. These differences extend to: whether or not workplace learning is assessed, and if it is the role that workplace supervisors rather than teachers play in the assessment; the typical length of time that students spend in the workplace; whether or not time in the workplace is used for structured training; and the role of employers in managing programs and in selecting students.
- Wide differences exist between the States in the number of national modules that students can typically gain as the result of undertaking school-industry programs within the same industry. These differences have major implications for the amount of credit that students are able to gain towards post-school apprenticeships, traineeships and TAFE

courses, as well as for the depth and quality of skills that school-industry programs develop for these industries. In many States there is significant uncertainty within school-industry programs about the level and nature of vocational credit that students will receive as a result of undertaking programs.

- In some States schools appear to make genuine efforts to ensure that students who undertake work placements are not disadvantaged in other areas of their school work. In others a high proportion of students appear to receive few concessions within their timetables to accommodate work placements, having to do work placements entirely in their own time or miss normal classes to attend work placements.
- Differences between the States are marked in the extent to which school-industry programs are perceived to be a standard senior school subject or an additional subject, in whether students' results are recognised and recorded on senior school certificates, and in whether the workplace learning component of school-industry courses counts towards the students' school course.

Many of these differences have less to do with the needs of students or the preferences of employers than with the circumstances, traditions and territorial imperatives of education systems. The policies, guidelines and procedures of central school authorities appear to have more to do with these differences than do factors that are under the control of individual schools. Almost all of them have significant implications for the overall quality of programs, and on a number of broad dimensions differences between the States in program quality appear sharp.

It is now appropriate to reduce unhelpful diversity between the States in the ways that school-industry programs and vocational education in schools are approached, and to establish an agreed approach to minimum standards and program quality in order to better meet the needs of students and of employers. Despite present opportunities for reform within a number of States, a common vision, an agreed approach to minimum standards and a common commitment to quality are unlikely to emerge if the States are left to their own devices. Both vocational education in schools and school-industry programs are matters in which the Commonwealth has a clear interest and clear responsibilities by virtue of its national role in economic and labour market policy formulation and implementation. It has the opportunity through direct leadership, through policy development, and through direct financial leverage to assist in bringing about a reduction in those forms of diversity that adversely affect quality and outcomes.

Such minimum quality standards should include a consistent approach to the value of all vocational education courses and school-industry programs within each State, should incorporate a minimum period of structured workplace learning into all courses, and should require programs to be of a length and depth that is sufficient to deliver recognised national

competencies and lead to a recognised vocational qualification. These minimum standards should contain presumptions about the assessment and recognition of workplace learning and about employer involvement in program management, should require appropriate experience and qualifications for those delivering the classroom components of programs, and should require appropriate resourcing of both the workplace and school-based components of courses or programs.

1. Introduction

The 1996 ACER national survey of school-industry programs

School-industry programs that include periods of time in the workplace have grown rapidly in Australia in the 1990s. In 1996 12 per cent of Australian Year 11 and 12 students participated in these programs, compared to seven per cent in 1995. Two thirds of the programs that were operating in 1996 had only commenced in either 1995 or 1996¹. This report outlines ways in which the Australian States² differ in their approaches to such programs. It is substantially based upon a detailed analysis of data gathered for the 1996 national survey of school-industry programs conducted by the Australian Council for Educational Research (ACER)³. The survey is the source of the great majority of the report's tables and figures, but the report also draws upon a range of other material in order to place the analysis of the ACER data into a wider context. The report describes the situation that existed in 1996, drawing upon the best and most recent indicative national data on school-industry programs that allows comparisons to be made within a common framework.

The 1996 ACER national survey of school-industry programs is the second that the organisation has conducted. It involved a mail questionnaire that was based upon the questionnaire used in the 1995 ACER survey of school-industry programs, which was modified as a result of that experience and as a result of a series of consultations with the Australian Student Traineeship Foundation and with staff in education authorities throughout Australia. Questionnaires were sent to all Australian schools with Year 11 and 12 students in September 1996, with a systematic follow-up of non-respondents being conducted in late October. A second reminder was sent in mid-November, and facsimile messages sent to any remaining non-respondents in early December. This resulted in 1,453 of the 1,868 schools contacted returning completed questionnaires, a response rate of 78 per cent. Response rates ranged from 87 per cent for schools in Tasmania to 67 per cent for schools in the Australian Capital Territory. The authors comment that by any survey standards this constitutes a high response rate and provides a basis for

¹ Ainley, J. and Fleming, M. *School-Industry Programs National Survey 1996*. Melbourne: Australian Council for Educational Research, 1997. For the purposes of the survey the authors defined school-industry programs as those programs involving currently enrolled Year 11 and 12 students in which students spend time in the workplace as part of the program. This definition is followed in this report.

² The terms States is used here to refer to the States and Territories.

³ Gratitude is expressed to the Australian Student Traineeship Foundation, which commissioned the survey, for agreeing to make the data available for the purpose.

confidence that the data validly reflect the state of school-industry programs in Australia.

The present report places its primary emphases upon the character and quality of students' and employers' participation in programs, and upon the outcomes that students gain from them. It is not primarily concerned with absolute levels of participation, although a chart is included in the Appendix (Figure A1) which summarises differences between the States in student participation levels. An indication of the absolute scale of participation in each State is given in the final row of Table A1.

◆ Why workplace learning matters

School-industry programs are only one of the ways in which Australian schools have become involved in initial vocational preparation in recent years. In some States, notably Queensland⁴ and New South Wales⁵, significant resources are devoted by school systems to vocational education courses that are delivered entirely within the school or TAFE classroom, without any requirement for workplace learning to occur. In Queensland, and commonly in Victoria, central school authority guidelines for vocational education courses do not mandate workplace learning.

Nevertheless school-industry programs assume a particular significance in the context of Australia's attempts to improve and expand opportunities for its young people to gain recognised work force skills and vocational qualifications. Not the least reason for this is the fact that other forms of initial vocational preparation appear to be experiencing either little growth or decline. Apprenticeship numbers have failed to recover from the decline experienced in the early 1990s, recent expansion in traineeship numbers has largely gone to adults rather than to youth, and TAFE participation by young people has shown few signs of recovering from the decline that was experienced in the 1980s. Yet school-industry programs are expanding rapidly.

School-industry programs are also important because of the strong support that is given to school-industry partnerships and to workplace learning by major international agencies, by overseas and Australian research, and by the

⁴ In Queensland students can take TAFE modules or subjects either through the school itself or through attending a TAFE college for part of the week. A 1995 study estimated that in the early 1990s 45 per cent of Year 11 and 12 students in Queensland studied TAFE modules or courses as part of their program of study (Sweet, R. An overview of school to work arrangements in Australia. Paper presented to a Roundtable on Transition from School to Work in OECD Countries: A Comparative Analysis. Paris: OECD/CERI, 1995). This compares to 17.5 per cent who enrolled in a school-industry program in 1996.

⁵ In 1996 some 24,000 Year 11 and 12 students in New South Wales enrolled in Joint Secondary Schools-TAFE programs, which generally do not require a workplace learning component, compared to some 17,600 Year 11 and 12 students estimated by the ACER survey to be taking part in a school-industry program.

policy positions adopted by peak Australian industry bodies and Commonwealth and State Ministers.

- The OECD has been consistent since the late 1980s in:
 - Pointing to the failure of vocational education that is confined to classrooms to provide tangible labour market returns for participants or to respond rapidly enough to changing labour market circumstances⁶;
 - Urging closer relationships between the classroom and the workplace in initial vocational preparation⁷; and
 - Arguing for better articulation between school and work, based upon serious partnerships between the public and private sectors, as an effective tool in reducing youth unemployment⁸.
- The World Bank has similarly argued that vocational education that is confined to the classroom and that does not involve close links with working life is unlikely to deliver substantial returns in the labour market⁹.
- The need for high quality structured workplace learning opportunities to form a cornerstone of reformed school to work arrangements is a constant theme in recent American debate on initial vocational preparation. For example in a 1989 publication the prestigious Brookings Institution pointed out that "A focal point of European efforts to upgrade work force quality has been the relationship between schools and the world of work" and asserted that "Work experience and work-relevant education are the keys to smooth school-to-work transitions"¹⁰. In its 1994 *National Assessment of Vocational Education* the U.S. Department of Education recommended that the new Perkins Act, which provides Federal funding for vocational education, should encourage business-education partnerships capable of including large numbers of students¹¹.
- This policy focus has been underpinned by a substantial research base showing that work-based learning is a powerful means of developing

⁶ *Structural Adjustment and Economic Performance*. Paris: OECD, 1988.

⁷ *Vocational Education and Training for Youth: Towards Coherent Policy and Practice*. Paris: OECD, 1994.

⁸ *Education at a Glance 1996*. Paris: OECD, 1997.

⁹ Haddad, W., Carnoy, M., Rinaldi, R. and Regel, O. *Education and Development. Evidence for New Priorities*. Washington, D.C.: The World Bank, 1990.

¹⁰ Nothdurft, W. *Schoolworks: Reinventing Public Schools to Create the Workforce of the Future*. Washington, D.C.: The Brookings Institution, 1989.

¹¹ Boesel, D. and McFarland, L. *National Assessment of Vocational Education. Final Report to Congress*. Washington, D.C.: Office of Research, U.S. Department of Education, 1994.

conceptual skills, deep understanding of workplace skills and concepts, and of motivating students to perform effectively in school¹².

- Australian research shows that workplace learning is an effective way to develop key employment competencies as well as to improve students' motivation and interest in their school work¹³.
- In the development of the Australian Vocational Training System (AVTS) both peak industry bodies and relevant Commonwealth and State Ministers adopted the view that an essential feature of the new training system was the incorporation of real experience in real workplaces. This view was reflected in the definition of the AVTS that was adopted by Commonwealth and State Ministers in November 1994 to guide implementation during 1995-96. Since the mid 1990s both sides of the Commonwealth Parliament have given strong support to the expansion of school-industry programs and to the improvement of their quality.
- Within New South Wales a recent major review of the Higher School Certificate has taken the view that vocational education courses that do not contain a workplace learning component should be discontinued, in recommending that all vocational education be brought within a single framework under broad industry groupings with all courses containing structured workplace learning¹⁴.

◆ Program quality

This report takes a clear position on the quality of school-industry programs. Implicit in its analysis is the view that quality stems from a number of characteristics of the programs in which young people participate. These include:

- A requirement for students to spend substantial rather than brief periods of time in the workplace, with this time being used for structured learning rather than simply for observation or experience;

¹² Stone, J., Stern, D. and McMillian, M. Adolescents' perceptions of their work: School supervised and non-school supervised. *Journal of Vocational Education Research* Vol. 15(2) pp. 31-53, 1990; Berryman, S. Apprenticeship as a paradigm for learning. in Rosenbaum, J. et. al. *Youth Apprenticeship in America: Guidelines for Building an Effective System*. Washington, D.C., William T. Grant Foundation, 1992; Raizen, S. Learning and work: The research base. in *Vocational Education and Training for Youth: Towards Coherent Policy and Practice*. Paris: OECD, 1994.

¹³ Scharashkin, R. *Learning from TRAC*. Hobart: Department of Education and the Arts, 1995; Teese, R., Davies, M. and Ryan, C. *Work Placement Experience: The Student Perspective*. Educational Outcomes Research Unit, The University of Melbourne, 1997.

¹⁴ McGaw, B. *Shaping Their Future. Recommendations for the Reform of the Higher School Certificate*. Sydney: Department of Training and Education Coordination, 1997.

- The formal assessment and reporting of this learning, and its recognition by both industry and school systems;
- The presence of workplace supervisors, appropriately trained and experienced for their role, to supervise and train students in the workplace;
- The recognition by schools that workplace learning time is a valid and normal part of students' school program, and the manifestation of this recognition in the way that the school timetable is organised;
- The existence of close connections at the local level between the school and employers;
- Close involvement by employers in significant aspects of the operation of programs such as student selection, assessment and program management; and
- Coordination of the program by a person who is appropriately experienced and trained for the role.

Setting out characteristics such as the above is not to deny that others are also important in adding to program quality, but simply to assert that these are fundamental, and that without them the presence of other characteristics is unlikely to be effective in raising program quality. Dual recognition or dual certification by school and vocational education authorities is, as an example, unlikely to result in high quality school-industry programs if virtually all of the learning that is recognised or certified takes place in classrooms, divorced from the realities of workplaces. Nevertheless appropriate recognition of learning, preferably through certification, is important in allowing students to capture the full benefits of their workplace learning¹⁵.

The view that program quality is reflected in characteristics such as the above is based upon substantial overseas and Australian evidence on good practice. Examples include:

- A recent OECD publication on lifelong learning contrasts employer-led systems of vocational preparation, which place strong emphasis upon learning on the job with additional instruction through formal teaching, with education-led systems where the emphasis is upon classroom learning of vocational skills. It presents strong evidence from international comparisons that employer-led systems are more effective in facilitating the transition into employment and are associated with lower youth unemployment than education-led systems. If systems are

¹⁵ In a review of US cooperative education programs (which in many respects resemble Australian school-industry programs) Stern and his colleagues argue that the absence of formal certification that is recognised by employers is likely to be a significant reason for students failing to be able to realise the benefits of their workplace learning in subsequent employment. See Stern, D. et. al. *Research on School-to-Work Transition Programs in the United States*. Berkeley, C.A.: National Center for Research in Vocational Education, 1994.

not employer-led a high rate of participation in secondary vocational education is not related to youth unemployment.

Employer-led systems are reported to have at least five advantages:

- Drop out rates appear lower;
 - Learning efficiency appears higher because skills are learned more quickly and new technologies are introduced earlier;
 - Enterprises gain information about students that makes recruitment decisions more efficient;
 - The cost efficiency appears higher; and
 - Learning at the workplace prepares students for a lifetime of learning at work¹⁶.
- A 1991 U.S. General Accounting Office report, based upon both empirical research and decades of experience, concluded that the key elements of cooperative education programs that characterise them as being of high quality included:
- A formal training plan setting out what was to be taught and learned;
 - The presence of a trained program coordinator;
 - Employer involvement in student selection;
 - Monitoring of students on the job by program coordinators; and
 - The evaluation of student performance against the training plan at the end of placements, with the evaluation carried out by the job supervisor in association with the coordinator¹⁷.
- Villeneuve and Grubb, after studying Cincinnati's long standing co-op education programs, argued that their success and sustainability is primarily a function of clear common expectations among colleges and employers about program quality and processes, developed through local face-to-face contact and constant discussion, rather than the outcome of factors such as skill standards, certificates or other formal regulatory mechanisms¹⁸.
- A review of exemplary practices in programs that connect U.S. two-year colleges to work concluded that key success factors include strong program leadership, strong connections between programs and their

¹⁶ OECD *Lifelong Learning for All*. Paris: OECD, 1996.

¹⁷ U.S. General Accounting Office *Transition from School to Work: Linking Education and Work Site Training*. (GAO/HRD-93-139). Washington, DC: US Government Printing Office, 1991. Summarised in Stern et. al., 1991, op. cit.

¹⁸ Villeneuve, J. and Grubb, N. *Indigenous School-to-Work Programs: Lessons from Cincinnati's Co-op Education*. Berkeley, C.A.: National Center for Research in Vocational Education, 1996.

local economy, frequent and effective communication with local employers, and an effective school-based learning component¹⁹.

- Richard Kazis, of the influential Boston-based organisation Jobs for the Future, argues that the essential features of youth apprenticeships, which in the American context correspond closely to the school-based apprenticeships currently under discussion in Australia, should include:
 - Close participation by employers;
 - The integration of work-based and school-based learning;
 - The integration of academic and vocational learning; and
 - Appropriate certification including links to post-secondary study²⁰.
- On the basis of research on Japan, on Germany and on U.S. local communities, James Rosenbaum of Chicago's North Western University has argued that successful transitions from school to work hinge upon the development of close local connections between students, teachers and employers which result in common shared expectations about student performance and its consequences, as well as shared expectations about the responsibilities and obligations of teachers and employers²¹.
- An evaluation of AVTS pilot projects concluded that a key to their success and to the future growth of the AVTS was the development of school timetables that facilitate rather than prevent students from participating in work placement²².
- Recent research by Teese and his colleagues from the University of Melbourne has shown that the impact of work placements upon students' enjoyment, motivation, perceived skill gains and perception of the relevance of school to post-school pathways increases directly with the length of their work placements. Students on short placements are more likely to find them boring and to indicate that they have learned little²³.

¹⁹ Bragg, D. and Hamm, R. *Linking College and Work: Exemplary Policies and Practices of Two-Year College Work-Based Learning Programs*. Berkeley, C.A.: National Center for Research in Vocational Education, 1996.

²⁰ Kazis, R. *Improving the Transition from School to Work in the United States*. Washington, D.C.: American Youth Policy Forum, Competitiveness Policy Council, and Jobs for the Future, 1993.

²¹ Rosenbaum, J. Preconditions for effective school-to-work linkages. Paper presented to an OECD/ CERI Roundtable meeting on Transition from School-to-Work in OECD Countries. Paris: OECD, 1995.

²² *Implementation Review of the Australian Vocational Certificate Training System Pilot Projects*. Adelaide: National Centre for Vocational Education Research, 1994.

²³ Teese, R., Davies, M. and Ryan, C. *Work Placement Experience: The Student Perspective*. Educational Outcomes Research Unit, The University of Melbourne, 1997.

- The 1996 ACER national survey of school-industry programs reports that those programs with more than 20 days per year of work placement were more likely than programs with short periods of work placement to:
 - Be better integrated into the curriculum;
 - Involve students attending more than one site for work placements (thus broadening their experience and facilitating the transfer of learning);
 - Involve structured learning rather than observation and experience;
 - Have workplace supervisors for students at the work site;
 - Formally assess students' workplace learning; and
 - Have a joint industry-education management group²⁴.
- A recent Victorian survey of small and medium sized employers' attitudes towards work placements found that 91 per cent wanted to be involved in the development of the program, and that 88 per cent wanted to be involved in assessing the student's work placement²⁵.

²⁴ Ainley and Fleming, 1997, op. cit.

²⁵ Helms, R. and Nelson, B. *Report on Structured Workplace Learning in Small to Medium Sized Enterprises*. Melbourne: Victorian Employers' Chamber of Commerce and Industry, 1997.

2. What sorts of programs are available, and how do they relate to student needs?

A wide range of school-industry courses or programs exist, both within and between different States. At times the types of programs that are officially endorsed or encouraged by central authorities in each State for the delivery of vocational education, such as VET in Schools (previously Dual Recognition) courses in Victoria, overlap with but are not identical to school-industry programs. Some school-industry programs fit within States' officially adopted or encouraged central frameworks, where these exist. Others do not. At times education authorities might indicate that such programs are not VET (vocational education and training) courses or programs because they do not satisfy one or other of the central guidelines, such as dual accreditation, laid down for VET programs or courses. Whether they do or do not, schools are offering them, believing that they will improve students' preparation for work, students are enrolling in them, and they fall within the definition of school-industry programs adopted by the ACER for purposes of its 1996 national survey. As such they are a focus of this report.

Many of the different types of school-industry programs that are available co-exist within the one State. In Tasmania for example, whilst VET programs built around the national competency standards of particular industries are the predominant type of school-industry program, and account for some 70 per cent of students, some one in five students are in a more generic work education course closely modelled upon a similarly named Queensland course (see Table A1).

In Victoria VET in Schools programs have received the strongest support in resourcing and policy terms at a central level and account for some 60 per cent of students. Yet close to 40 per cent of school-industry program students are found in other types of programs, including those described by the ACER survey respondents as work experience. Similarly in New South Wales the centrally developed Content Endorsed /Industry Studies courses, largely based upon national standards in particular industry areas, account for around six in ten school-industry program students. Yet around one in six school-industry program students are enrolled in generic work experience programs not allied to particular industry standards. That such differences exist within any one State might suggest a degree of uncertainty within States about how workplace learning is to be incorporated into upper secondary schooling.

In States such as New South Wales and Queensland school-industry courses sit alongside a significant provision of vocational education courses that do not require a workplace learning component. In New South Wales there are different varieties both of courses that require workplace learning and of

courses that do not²⁶. Tasmania and Western Australia have both adopted a more unified policy and curriculum framework, and have required workplace learning to be included in all vocational education courses²⁷. Victoria has established a unified central framework for vocational education in schools that encourages but generally does not mandate work placement, although substantial numbers of school-industry program students sit outside of it. Like Victoria, Queensland has generally not mandated work placement within central curriculum frameworks²⁸.

Outlined below are more details of some of the dimensions along which school-industry programs differ.

◆ **Single subjects**

On the one hand there are courses that are organised as separate but discrete and isolated school subjects, at times developed around content based upon national industry standards, at times of a more general nature. In these cases students are free to choose such subjects without there being any implications for their freedom to choose other senior school subjects. This approach is the most common in New South Wales and South Australia, and is also common in Queensland.

◆ **Coherent programs**

In States such as Tasmania and Western Australia school-industry courses have been developed as part of wider programs of study that contain a range of subjects which students do as a package, typically combining both vocational and general education subjects, and with the vocational subjects being based upon national industry standards where available. In Tasmania the vocational content of such programs would typically represent around two fifths of students' total study load. Once students enrol in such programs or packages their range of choice with respect to other subjects is constrained. Victoria's VET in Schools programs have much in common with this approach.

The programs approach can result in greater depth and coherence in the student's total course of study, compared to the greater fragmentation and lesser depth of vocational preparation that results from the isolated subject approach. On the other hand it can be characterised as streaming, as

²⁶ The McGaw review of the New South Wales Higher School Certificate has recommended that this diversity be rationalised to bring all courses within a single framework under broad industry groupings.

²⁷ Recent developments in South Australia, in the form of its 1997 Ready, Set, Go! policy, could be seen as leading in this direction.

²⁸ Nevertheless close to 90 per cent of students in Victorian VET in Schools programs engaged in workplace learning in 1996 (Sweet, R. *How Well Does the VCE Accommodate Vocational Education and Work Placements?* Sydney: Dusseldorp Skills Forum, 1997).

frequently the programs do not lead to university entry²⁹. In the single subjects approach students can more often study some vocational content yet still have a total program of study that will qualify them for university entry³⁰.

◆ **Embedding**

Embedding is a third model that has been used in the development of school-industry programs, and has been adopted to varying degrees in Victoria, Queensland, Western Australia and South Australia as one element of their approach to vocational education. In this instance the content of vocational modules is included within schools' general education subjects (for example elements of national communication modules are delivered within English courses), or the content of school-developed courses is mapped against TAFE courses, national vocational modules or industry competency standards.

In this approach to school-industry programs the delivery of the workplace component of the program can be more difficult to arrange than is the case in the first two approaches. A further difficulty with the embedding approach is that it is dependent upon credit transfer arrangements for students to be able to realise VET or TAFE outcomes, and, as indicated elsewhere in this report (pp. 33-34), many credit transfer arrangements appear to be poorly understood. An advantage of embedding is that it can help to break down artificial barriers between general and vocational education, and help both teachers and students to see the workplace relevance of their general education subjects.

◆ **Program length**

Table 1 shows that there are marked differences between the States in the typical length of school-industry programs, and it would seem logical to conclude that this has significant implications for the depth of knowledge and skill that students are potentially able to develop. At one end of the spectrum two thirds of all students in South Australia and four in ten in the Australian Capital Territory are in programs that last only for one semester, whereas in New South Wales, Victoria, Western Australia and the Northern Territory almost no students can be found in such short programs. At the other end of the spectrum in the three larger States six students in ten are in programs that last for two years. Tasmania, in contrast to other States, has nine in ten of its students in one year programs.

²⁹ This is not the case however with Victoria's VET in Schools programs, all of which are recognised for purposes of university entry. This, however, appears to be at the cost of many school-industry programs existing outside of the framework of the VCE, and many students undertaking quite brief work placements with far less support from the school than is the case in other States. (Sweet, R. *How Well Does the VCE Accommodate Vocational Education and Work Placements?* Sydney: Dusseldorp Skills Forum, 1997).

³⁰ McGaw's recommendation for a TER to be calculated on only eight of 12 units of HSC study could be seen as a way of combining the best of both approaches.

Table 1: Per cent of students in programs of different length

	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	AUS
1 semester	11.1	8.2	33.2	68.3	4.0	7.7	3.2	41.0	22.9
1 year	7.8	20.4	0.8	17.5	19.6	88.6	19.5	52.0	11.2
1 or 2 years	19.0	10.0	4.7	11.1	46.0	6.0	25.2	7.0	14.8
2 years or more	62.1	61.4	61.3	3.1	30.3	3.8	52.0	0.0	51.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

◆ **Generic versus specific courses**

A key dimension along which school-industry programs differ is the extent to which they are based upon content drawn from the competency standards of particular industries or occupations, as opposed to adopting a more generic cross-industry or cross-occupational approach to content. This distinction is closely related to the question of whether the workplace time is primarily used for observation and experience or for structured learning.

- 88 per cent of all students in programs described as Work Experience, Transition Education, Work Studies or Work Education are in programs that cover multiple industries, and only 29 per cent of such students use their workplace time for structured learning, with 71 per cent using it for observation and experience only.
- On the other hand 73 per cent of students in all other types of programs are in programs that focus upon a single industry. 70 per cent of such students use their workplace time for structured learning with only 30 per cent using it for observation and experience.

Nationally 41 per cent of school-industry program students are in programs that appear to focus upon providing a generic orientation to work, careers and employment (see Table A1), 23 per cent being in programs described as work experience and another 18 per cent in other similar programs³¹. At a national level roughly half of all school-industry program students are in programs that focus upon multiple industries rather than upon the skills and competencies of a particular industry (see Table A2).

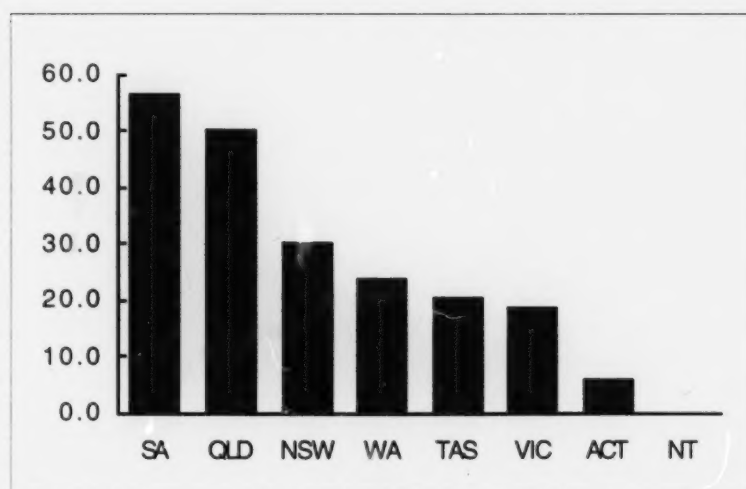
Each type of program has its advantages in meeting the needs of particular students. For some students a generic orientation towards work, careers and employment is appropriate for their stage of development, and is an essential foundation for the development of employment skills. For other students a more intensive and specific preparation for employment in a particular

³¹ In some instances, as is frequently the case in Tasmania and more rarely the case in New South Wales, such generic courses can be the vehicle through which the work placement component of industry-specific programs is delivered and resourced.

industry or occupational area is appropriate. While generic courses can lay a foundation for the development of employment skills, those that are based upon the competency standards of particular industries are able to link more clearly into post school career pathways and post-school further education and training.

Figure 1

Per cent of students enrolled in multi-industry programs that provide a generic orientation to work, careers and employment



However the scale of the differences that can be observed between the States in the distribution of students across courses of each type is unlikely to be a reflection of real differences between them in the needs and interests of their students. As Tables A1 and A2 show, the distribution of students across these broad types of programs varies widely between the States. Students are more likely to be found in multi-industry programs in Queensland, Western Australia and South Australia, rather than in programs that concentrate upon developing the competencies specified by a single industry. Students are more likely to be enrolled in programs that focus upon providing a generic orientation to work, careers and employment in Queensland and South Australia, rather than in programs that provide a more specific form of vocational preparation. It is inherently implausible that the types of students most likely to benefit from such programs are concentrated in these States, whilst those most likely to benefit from exposure to a clear industry or occupational pathway are concentrated in Tasmania and the Australian Capital Territory.

Table 2 summarises, for each State, the distribution of students across a joint classification of these two broad ways of looking at the purpose and focus of

school-industry programs. Again, differences between the States, encapsulated in Figure 1 which is based upon the third row of Table 1, are sharp.

Table 2: Distribution of students by course type (per cent)

	NSW	VIC	QLD	SA	WA	TAS	ACT	NT	AUST
Single industry, generic	0.2	1.0	13.6	1.9	0.8	5.3	0.0	0.0	4.5
Single industry, other	57.1	61.4	29.6	36.7	25.7	74.3	92.3	60.9	46.2
Multi industry, generic	30.1	18.6	50.1	56.5	23.6	20.4	6.0	0.0	36.2
Multi industry, other	12.6	19.0	6.8	4.9	49.9	0.0	1.6	39.1	13.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Taken together Figure 1 and Table 2 point to sharp and inexplicable differences between the States in the ways in which they have interpreted the needs of senior school students. South Australia and Queensland appear to have felt that a broad, generic orientation towards working life is needed by a majority of the students taking part in school-industry programs. On the other hand the Australian Capital Territory and the Northern Territory appear to have rejected any role in Years 11 and 12 for programs that provide a generic orientation towards working life. They and other States appear to have taken the view that the majority of students taking part in school-industry programs need a much more focused concentration upon the knowledge and skills required by particular industries.

Whatever the real needs of students might be, and however these might translate into an appropriate mix of program types within each State, it is clear from these results that considerable confusion exists within the States about students' needs as they develop towards occupational competence, and about the ways in which the workplace might best be used to meet these needs.

3. Do the characteristics of programs vary across the States within particular industries?

◆ Program length and work placement length

The ACER survey gathered information on the industry focus of programs, with roughly half of all students being found in programs that focus upon only a single industry. In these cases the odds are high that the programs will be based upon the national competency standards of a particular industry, where, as in the case of industries such as hospitality and metals and engineering, these exist. In such instances it would be reasonable to expect a fair degree of uniformity in the way in which the development of competence against these standards occurs, and in particular a fair degree of uniformity in the way in which the workplace is used.

Total enrolments of 1,000 or more were observed in the case of five industry areas, allowing comparisons between the States to be made on the basis of reasonably large sample sizes. These industry areas were: building and construction; hospitality; metals and engineering; office and clerical; and retail. In all of these national competency standards or national traineeship modules are widely adopted within the States as a basis for course content.

■ Program length

Table A3 shows that in the case of the building and construction, hospitality, metals and engineering and retail industries there is a fair degree of uniformity in the typical length of programs in the three major States, with the great majority of students in each instance being in two year programs. However in the smaller States there is substantially more variation in the typical length of programs in the hospitality, retail and office and clerical industries. For example whereas nine in ten hospitality students in New South Wales, Victoria and Queensland are in two year programs, seven in ten South Australian hospitality students are in programs that are a year or less in length, less than half of Western Australian hospitality students are in two year programs, and all Tasmanian and three in four Australian Capital Territory hospitality students are in one year programs.

■ Work placement length

There appears to be much greater confusion between the States about the appropriate way to link school-industry programs designed for particular industries to the workplace than there is about the overall length of programs designed for these same industries.

The ACER survey asked respondents to indicate the number of days per year that students spent in workplace learning, and classified programs as short, mid or extended in length according to whether students spent ten or fewer,

11 to 20 or more than 20 days in the workplace per year. Whilst admitting that there may be no clear basis for requiring a specified amount of time in the workplace, the authors of the 1995 national survey comment that programs with between five and 10 days would only be providing about the same amount of time as Year 9 and 10 work experience, with more than 20 days being more in keeping with what is envisaged for school-industry programs as outlined in the literature³². Clearly their presumption is that programs can be regarded as taking workplace learning seriously when more than 20 days of workplace learning are required each year, or at the least that they cannot where the length of work placements is very brief.

Table A4 shows, for each of these industry areas, the per cent of students in each State spending varying numbers of days in the workplace each year, with entries for any one industry being limited to those cases with 100 or more students per State.

In virtually all cases the variations between the States are marked, and appear to bear little relationship either to any objective industry needs or to the needs of students³³.

- Only in the building and construction industry is there a reasonable degree of uniformity in the length of work placements, with over half of all students in each State being on extended placements. Even so a third or more of building and construction students undertook short placements in New South Wales and Queensland, but almost none in Victoria.
- In New South Wales, Queensland, South Australia and the Australian Capital Territory upwards of 70 per cent of all hospitality students undertook short placements, as did 40 per cent of Victorian students. However in Western Australia and Tasmania 80 to 90 per cent of hospitality students took part in extended placements.
- The proportion of metals and engineering students undertaking extended placements ranged from a low of three per cent in New South Wales through 16 per cent in Queensland to 58 per cent in Victoria. In New South Wales 85 per cent of all metals and engineering students undertook short placements, but in Victoria less than one in ten did so.

³² Ainley, J. and Fleming, M. *School-Industry Programs National Survey 1995*. Melbourne: Australian Council for Educational Research, 1996.

³³ While there are consistencies within individual States in the tendency of students to undertake long or short placements, whatever the industry, some differences are inconsistent with the general pattern of work placements in particular States. For example in the case of building and construction in New South Wales and retailing in Victoria 51 per cent and 98 per cent respectively of all students are on extended placements, despite the fact that in each of these States on the whole only a relatively small proportion of all placements are extended (see pp. 25-26).

- In New South Wales, Victoria, Queensland and the Australian Capital Territory 80 per cent or more of office and clerical students undertook short placements. In Western Australia 88 per cent of office and clerical students undertook long placements.
- In New South Wales and South Australia roughly three quarters of all retail students undertook short placements, but in Victoria 98 per cent undertook long placements.

◆ **Assessment**

Another way to look at variation across the States in the way that school-industry programs relate to particular industries is to look at the assessment of workplace learning, both whether it is assessed at all, and if it is, how assessment is carried out. Tables A5 through to A8 summarise, for those States where enrolments in programs linked to particular industries are of reasonable size, some information on assessment practices in the five industries discussed in the previous Section: building and construction; hospitality; metals and engineering; office and clerical; and retail.

Table A5 suggests that workplace learning is more likely to be assessed than not in each of these six industries. Nevertheless there is a reasonable degree of inconsistency between the States in whether or not students' workplace learning is assessed within particular industry areas. For example:

- Two thirds of construction students in New South Wales have their workplace learning assessed but only one in six in Queensland;
- Ninety per cent or more of hospitality students in Western Australia, Tasmania and the Australian Capital Territory have their workplace learning assessed, but only around two thirds in New South Wales, Victoria and Queensland; and
- In Western Australia all office and clerical students have their workplace learning assessed, but in New South Wales and the Australian Capital Territory this is the case for only slightly more than half of all students.

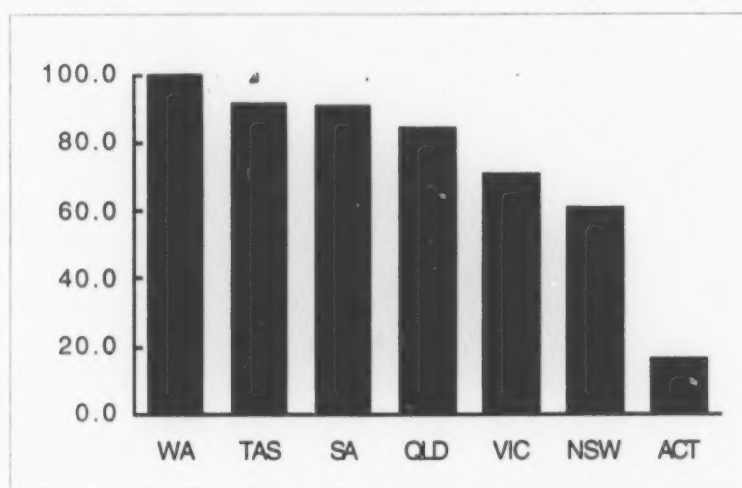
Tables A6, A7 and A8 show that when workplace learning is assessed, within most industry areas there is a fair amount of variation between the States in three key dimensions of assessment: whether or not a competency log book is used to record learning outcomes; whether or not workplace supervisors carry out the assessments; and where workplace skills are assessed. For example:

- Nearly all construction students in New South Wales have their competencies recorded in a log book, and half of them have their skills assessed by a workplace supervisor. In Queensland only around a third of construction students have their competencies recorded in a log book, and less than a third have their skills assessed by a workplace supervisor;

- Workplace supervisors assess the skills of all Western Australian hospitality students, but assess the skills of only around one in six students in the Australian Capital Territory;
- Workplace supervisors assess the skills of all metals and engineering students in Victoria and Queensland, but assess the skills of under two thirds of students in New South Wales;
- All retail students in Victoria but less than half in New South Wales have their skills assessed by a workplace supervisor; and
- The workplace, where the most authentic observation can be made of workplace performance, is likely to be the only place where workplace skills are assessed for less than one in ten New South Wales hospitality students, but is the only assessment location for roughly half of all South Australian and Western Australian hospitality students;
- The school is reported to be the only place where workplace skills are assessed for nearly one in five New South Wales office and clerical students and nearly one in ten Victorian office and clerical students, but for almost no office and clerical students in other States.

Figure 2

Per cent of hospitality students having their workplace learning assessed by a workplace supervisor



4. How do programs relate to young peoples' job opportunities?

Roughly half of all 1996 school-industry program students were in programs that spanned more than one industry, with the proportion of students in multi-industry programs varying widely between the States. In this Section we look at programs that focus upon a single industry. Table A2 shows that, as with multi-industry programs, there are wide differences between the States in the proportion of school-industry program students who are found in programs linked to particular industries. Tables A9 and A10 show the distribution of teenage employment by industry and occupation within each State. Taken together the three tables suggests that in most States there is at best a loose relationship between labour market demand, youth employment opportunities and the school-industry courses that are provided. In very many instances the proportions of young people in particular occupational or industry areas seem to make little sense in terms of the structure of the labour market, particularly when set against the distribution of youth employment.

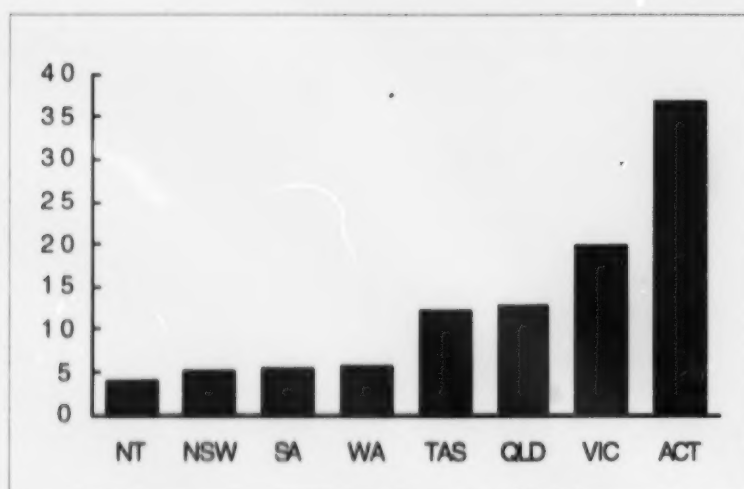
A few examples will suffice:

- The proportion of students enrolled in manufacturing or metals courses is roughly twice as high in New South Wales, Tasmania and Western Australia as it is in Victoria, Queensland and South Australia, yet manufacturing accounts for roughly the same share of teenage employment in each of these States;
- The retail industry accounts for nearly half of all teenage employment in all States. The proportion of students enrolled in retail industry courses ranges from 0.4 per cent in Queensland to ten per cent in South Australia;
- In all States other than the Australian Capital Territory the automotive repair industry is a significant employer of teenagers, accounting for around five per cent of all jobs. Yet in four States it accounts for well under one per cent of all enrolments. The per cent of students enrolled in automotive courses ranges from a high of 10.4 per cent in Tasmania to a low of 0.1 per cent in New South Wales and Queensland. These two States, together with South Australia and Western Australia, appear to have made almost no provision for this major industry through school-industry programs;
- Only New South Wales, and to a lesser extent Victoria and Queensland, appear to have begun to provide school-industry programs for the construction industry to even a modest extent;

- Office skills courses account for only around one in twenty enrolments in four States yet over one in three in the Australian Capital Territory and one in five in Victoria.

Figure 3

Per cent of school-industry program students enrolled in office and clerical programs in each State



In some instances the patterns of course provision **within** a particular State reflect lack of interest by particular State ITABs in becoming involved in the development of courses in particular areas. In other instances they reflect the interest or lack of it that young people or their families show in particular career areas, such as retailing. But the latter cannot explain why differences **between** the States are so great. Any presumed lack of interest by young people in retailing, for example, is unlikely to explain rates of participation in retailing programs that are twenty five times as great in South Australia as in Queensland. Conversely, the strong interest that young males show in cars appears to stand in marked contrast to the almost total absence in four States of automotive school-industry programs. Where classroom based courses exist in the same industry area, it might be argued that the State provides for an industry in other ways. But this begs the question of why school-industry programs are deemed the appropriate way for schools to prepare young people for an industry in one State, yet classroom based courses are deemed more appropriate in another. It seems unlikely that resourcing and delivery decisions of this sort have been made on the basis of either industry needs and demands or student interests and preferences.

Another way of looking at these figures, apart from the perspective of young peoples' interests, would be to argue that the correspondence between

patterns of employment and course provision should be close. This would be unreasonable in view of the loose match that exists in the wider labour market between occupation and qualification, and it would also be unreasonable in view of the high degree of change and experimentation that is evident in young peoples' occupational choices. But equally there seems little justification for differences being as large as they are. For example hospitality and tourism play a significant role in the economy of the Northern Territory, and account for roughly one in ten of all teenagers' jobs there, as they do in New South Wales. Yet the Northern Territory appears to give its senior school students no opportunities to sample or prepare for hospitality and tourism careers through school-industry programs, whilst New South Wales makes a substantial provision. Western Australia and the Northern Territory appear to have no provision for agricultural school-industry programs, even though other States, with similar levels of youth employment in agriculture, do. Such examples make little sense in terms of either young peoples' possible career interests, their future employment patterns, or industries' need to recruit young workers with an appropriate base of skill and knowledge.

5. How do programs relate to employers and to the workplace?

◆ Assessment

Reference has been made in Section 3 to variation between the States in some aspects of assessment within particular industries. Here we look in more detail at assessment practices to gain an overall picture of how approaches vary between the States across school-industry programs as a whole.

Table A11 reports a number of indicators of the ways in which assessment in school-industry programs is conducted.

Key findings are that:

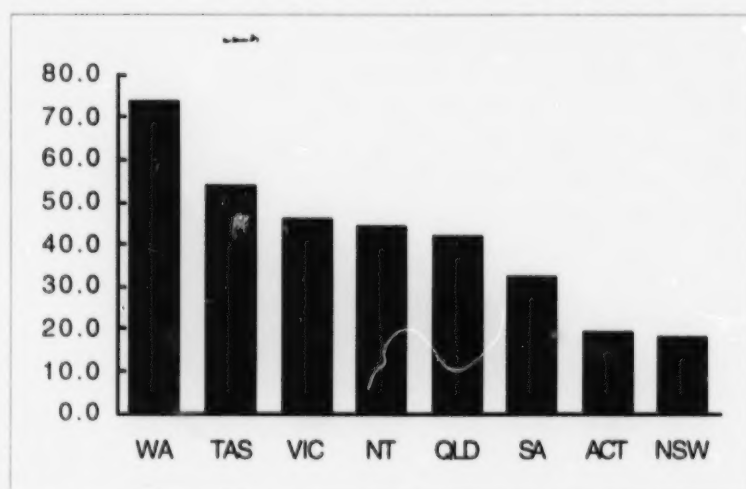
- The chances of students having their workplace learning assessed at all range from over nine in ten in Tasmania to only around one in two in Queensland. Somewhat over a third of students nationally do not have their workplace learning assessed at all;
- The States vary widely in the extent to which workplace supervisors play a prominent role in assessment. In Tasmania and Western Australia over three quarters of all students have their workplace learning assessed by a workplace supervisor, but in the Australian Capital Territory and New South Wales only around 40 per cent are assessed at all by their workplace supervisor. In Western Australia 70 per cent of students have their workplace learning assessed by a workplace supervisor but not by a teacher. In New South Wales assessment of workplace learning by a workplace supervisor but not a teacher occurs in less than one case in five.
- Conversely, the States vary widely in the extent to which teachers rather than workplace supervisors have a role in the assessment of workplace learning. School teachers assess eight in ten students' workplace learning in New South Wales but the workplace learning of only three in ten in Western Australia. Only two per cent of Western Australian students have their workplace learning assessed by a teacher but not by a workplace supervisor. In the Australian Capital Territory and New South Wales it is closer to one in three.
- Differences between the part played by teachers and the part played by workplace supervisors in assessing workplace learning are reflected in differences in where the assessments actually occur. In New South Wales and the Australian Capital Territory less than one in five students have their workplace learning assessed only in the workplace. In Western Australia nearly three in four do, and in Tasmania over one in two do. Assessment of workplace learning only in the school is relatively uncommon, with assessment in the workplace only or in both locations being more common. Nevertheless the practice of assessing

workplace learning only in the school is more common in South Australia and New South Wales than in other States, but appears virtually unknown in Western Australia, Tasmania and the Northern Territory.

- In all States a majority of students have their workplace learning assessed using a competency log. However in South Australia less than seven in ten do, compared to nine in ten or more in four other States.
- A majority of students have their workplace learning assessed against agreed learning outcomes, rather than simply by a general written or oral report, in all States, but the actual proportion ranges from a low of 58 per cent in South Australia and Western Australia to 84 per cent in the Australian Capital Territory.

Figure 4

Per cent of students whose workplace learning is assessed only in the workplace



In all education systems control over assessment is central to the organisation and control of learning. Consequently the ways in which employers and workplaces are involved in the assessment of the knowledge and skills that students acquire in the workplace is one indicator of the extent to which school systems have been willing to treat them as genuine partners in school-industry programs. Other features of assessment, such as the ways in which it is carried out, recorded and recognised, reflect how seriously it is taken and how seriously learning, in this instance workplace learning, is valued.

In part the differences in assessment practices observed here reflect the different program mixes in each State. But these in turn also reflect the ways

in which the workplace is regarded in different States' approaches to school-industry programs.

Taken together the results highlight a marked contrast between approaches to the assessment of workplace learning adopted in the various States.

- On the one hand in Queensland and South Australian school-industry program students are less likely to be assessed at all than are students in most other States. When they are assessed, they appear to be assessed far less formally and rigorously, with assessment being less likely to involve a competency log book and less likely to take place against agreed learning outcomes than in many other States.
- Assessments of workplace learning that take place in New South Wales rely heavily upon teachers and schools, rather than workplace supervisors and workplaces. New South Wales students are more likely than those in any other State to have their workplace learning assessed by a teacher and to have it assessed exclusively by a teacher, and they are the least likely to have their workplace learning assessed only in the workplace.
- Western Australia and Tasmania appear to have similar approaches to assessment, in that the great majority of their school-industry program students are assessed, are assessed more frequently by workplace supervisors and less frequently by teachers than are students in other States, and are more likely to have their workplace learning assessed in the workplace and less likely to have it assessed at school than are students in other States. Their assessments are more likely to involve a competency log book than are students' assessments in other States, and have a strong probability, particularly in the case of Tasmania, of being carried out against formal learning outcomes.

Queensland and South Australia appear to treat assessment within school-industry programs less seriously and rigorously than other States. In New South Wales it is far more likely to be controlled by schools, with minimal sharing of responsibility for assessment with the employers who provide the work placements and the training. In Tasmania and Western Australia³⁴ employers appear to be trusted far more than in other States as partners in the assessment process.

It is important to put these findings in the context of a recent survey of small to medium sized employers conducted by the Victorian Employers' Chamber of Commerce and Industry (VECCI) which found that 88 per cent of

³⁴ Even in the case of a State such as Western Australia, where employer involvement in the assessment process appears stronger than in many other States, workplace learning is regarded by schools as enhancing competencies delivered in the classroom. Workplaces are precluded from delivering competencies over and above those taught at school, and assessments by employers are not able to be used for credit towards national modules.

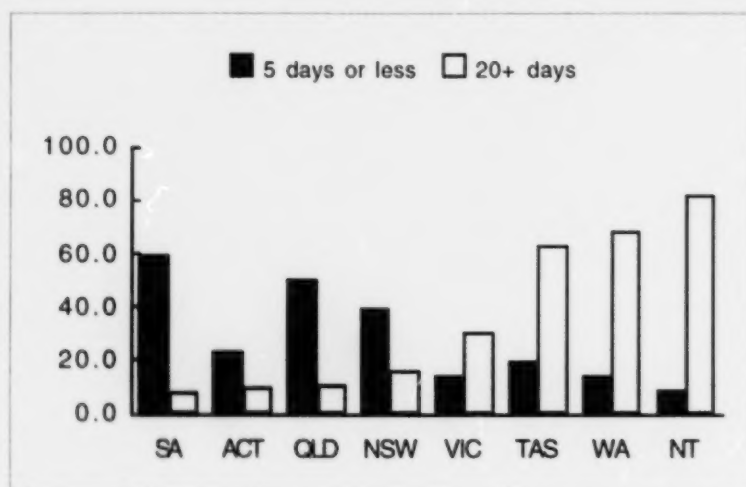
respondents want to assess the student's work placement performance and want to assist in this assessment³⁵.

◆ Length of workplace time

The amount of time that students are allowed to spend in the workplace is another indicator of the extent to which schools and school systems are willing to treat employers as genuine partners in school-industry programs and to allow students to experience learning that is not classroom-controlled. In South Australia, Queensland and New South Wales 40 per cent or more of students undertake very short placements, and, as with students in the Australian Capital Territory, less than one in five are involved in extended placements. On the other hand in the Northern Territory, Western Australia and Tasmania sixty per cent or more of students undertake extended placements and very few undertake very short placements (Figure 5).

Figure 5

Per cent of students involved in very short (5 days or less) and extended (more than 20 days) annual periods of work placement



Western Australia and Tasmania have each centrally specified that the minimum period of work placements should be 120 hours per year in all vocational education courses. New South Wales has taken a more minimalist approach by specifying five days as the minimum period of work placement in its Content Endorsed and Industry Studies courses. Queensland legislation specifies a maximum annual period of work placement (240

³⁵ Helms, R. and Nelson, B., 1997, op. cit.

hours) before students must be paid, but there are no requirements in place for a minimum period. Queensland, Victoria and South Australia to date have generally left it either to individual industries (typically through the ITABs) or to individual schools to decide upon work placement periods, although Victoria has recommended that programs include work placement and in practice close to nine in ten VET in Schools students undertake work placements. South Australia's recent (February 1997) Ready, Set Go! policy statement indicates that funds are to be provided by the State to support programs that integrate senior studies with 'extended work placements' which, while not specified, could be taken to mean placements of 20 days or more per year in line with ASTF funding criteria.

In practice, as Figure 5 indicates, students are most likely to spend extended periods of time in the workplace in those States such as Tasmania and Western Australia that have required that this be done. The Northern Territory is an exception to this rule in not having mandated a minimum period of time in the workplace, but the frequency of extended work placements there probably reflects the high proportion of students in the TRAC program, which requires extensive work placements. On the whole students are the least likely to have extended periods of time in the workplace where decisions on workplace time are left to individual schools or to local arrangements, or where, as in the case of New South Wales, minimum requirements are minimalist.

The high frequency of very short placements and the low frequency of extended placements in some States are of particular significance in light of the finding by the recent VECCI survey of small to medium sized employers that two thirds have a preference for placements of up to six months duration on a one day a week basis³⁶. It would seem, on the basis of this finding, that more extended placements are not likely to be a major hindrance to employer involvement. The benefits for students' learning and motivation of extended rather than short placements are clear from recent research by Teese and his colleagues³⁷, and a positive relationship between extended work placements and a number of indicators of program quality emerges as a key finding from the 1996 ACER national survey³⁸. Students who are on short placements are less likely than those on longer placements to be able to experience many key tasks in an employer's annual cycle of work (for example stocktaking, submission of taxation returns, periodic maintenance or harvesting). They have fewer opportunities to practice skills and to develop knowledge and understanding, and they encounter fewer variations upon standard work situations, and as a result have fewer opportunities to develop a broader conceptual understanding of workplace requirements.

³⁶ *ibid.*

³⁷ Teese, R., Davies, M. and Ryan, C., 1997, *op. cit.* See also page 8 above.

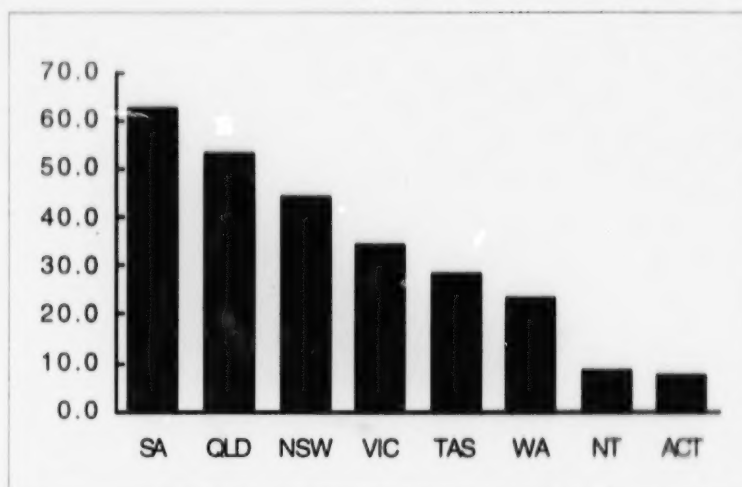
³⁸ Ainley, J. and Fleming, M. *op. cit.*, p.p. 68-69.

◆ Use of workplace time

In South Australia and Queensland half or more of all students are to be found in programs that use the workplace time for observation and experience only rather than for structured training, and in New South Wales the proportion exceeds 40 per cent. In contrast less than ten per cent of students in the two Territories are in such programs (Figure 6)³⁹.

Figure 6

Per cent of students in programs which report that workplace time is used for observation and experience rather than for structured learning



Another way to examine how the use of workplace time differs between the States is to limit the analysis to those programs that make use of extensive periods of time in the work place. For those programs that involve over 20 days of work placement per year Figure 7 shows the proportion of students in each State who are found in programs whose concern is to provide a generic orientation towards work, careers and employment⁴⁰.

New South Wales and Queensland stand in marked contrast to all other States, with sixty per cent of all students who have extended contact with the workplace being in programs that do not appear to be intended to prepare

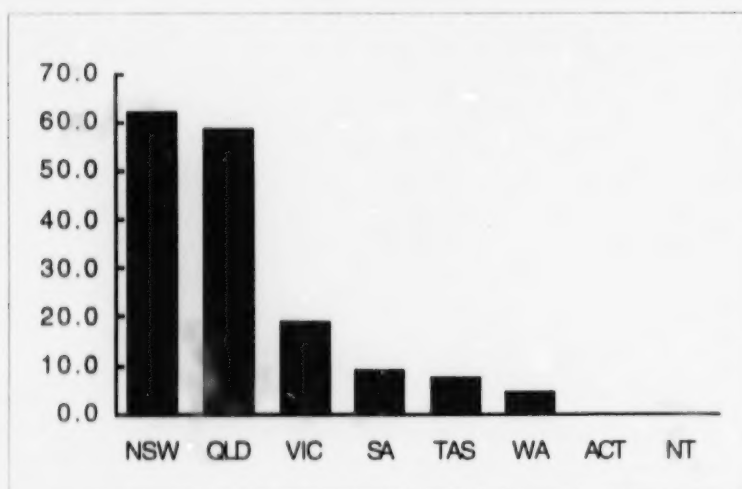
³⁹ As indicated in Section 2, the purpose for which workplace time is used is closely related to whether programs focus upon single or multiple industries, and to whether or not they provide a generic orientation towards work, careers and employment.

⁴⁰ In other words those programs described in Table A1 as Work Experience, Transition Education, Work Studies or Work Education.

them for particular industry or occupational career pathways, and that generally use the workplace time only for observation and experience rather than for structured training. In all other States the great majority of those on extended work placements are in programs that are built around particular industry or occupational standards, that are most likely to use the workplace for structured learning, and that are able to form a clear link to post school education and training pathways through the acquisition and certification of skills and knowledge needed in defined courses, occupations or industries.

Figure 7

Per cent of students on extended work placements who are in programs providing a generic orientation towards work, careers and employment



This reinforces the impression that considerable confusion exists among the States about what the needs of senior school students are as they develop towards occupational competence and about how these needs should best be translated into appropriate relationships with the workplace.

◆ **Workplace supervisors**

One useful indicator of the seriousness with which school systems take the quality of students' experience in the workplace is their willingness to invest in or encourage the training of the workplace personnel who supervise their students. Table 3 shows that whilst in all States the majority of students are in school-industry programs that have nominated workplace supervisors, it appears to be the exception rather than the rule for these supervisors to have received any training for their role.

Table 3: Per cent of students in programs with workplace supervisors and with trained workplace supervisors

	NSW	VIC	QLD	SA	WA	TAS	ACT	NT	AUS
Supervisors exist in each work site	74.1	68.2	62.3	65.6	85.6	94.4	82.7	93.8	70.9
Trained supervisors exist in each work site	41.0	36.4	30.1	42.6	63.6	71.5	48.5	92.5	40.6

Only in Western Australia, Tasmania and the Northern Territory are over half of all students in programs in which workplace supervisors have been trained. The proportion of students found in programs in which workplace supervisors have been trained ranges from 30 per cent in Queensland to 93 per cent in the Northern Territory.

◆ Program management

The extent to which programs have joint industry-education management groups is a further indicator of the extent to which employers have a genuine involvement in school-industry programs. Figure 8 shows that in four States less than half of all students are in programs that have joint industry-education management groups, with under a third being in such programs in New South Wales. Only in Tasmania and the Northern Territory are the great majority of students in programs with joint management committees⁴¹.

◆ Student selection

Willingness to involve employers in helping to select students is a key indicator of the extent to which schools are willing to enter into genuine partnerships with employers, and, as indicated in Section 1, is an important indicator of program quality. Figure 9 shows that employers have only a very minimal involvement in student selection in four States (the Australian Capital Territory, New South Wales, South Australia and Queensland), with less than one student in five being in programs in which employers play a role in student selection. Only in Tasmania are a majority of students in programs in which employers have been involved in helping to select them.

⁴¹ However a recent Tasmanian report comments that while there is strong support among Tasmanian employers for school-industry programs, difficulty is often experienced in translating this support into active participation on management committees. (Kirkwood, G. *Current Perceptions and Issues*. Hobart: Department of Education, Community and Cultural Development, 1997).

Figure 8

Per cent of students in programs that have joint local education-industry management groups

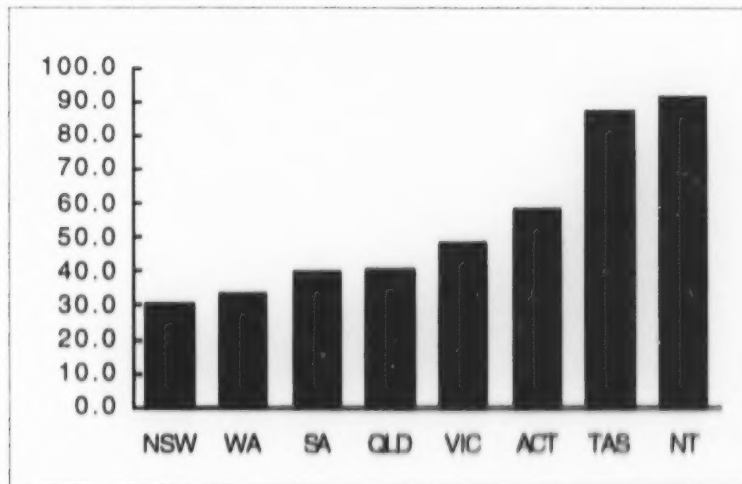
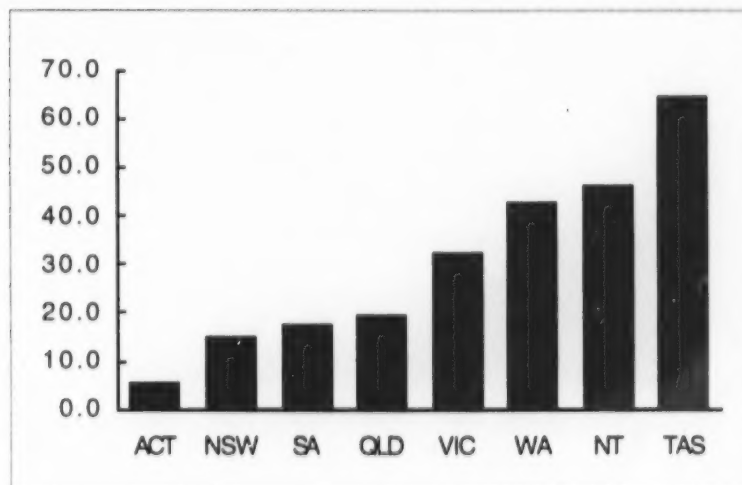


Figure 9

Per cent of students in programs in which employers are involved in helping to identify students best suited to the program

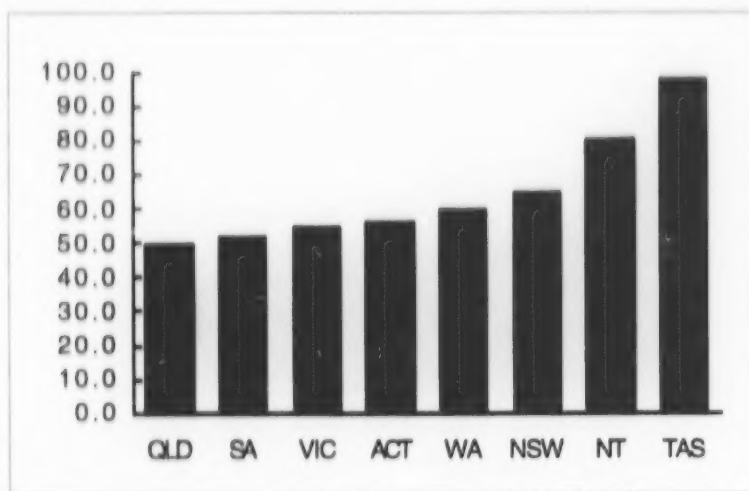


◆ **Program coordinator⁴²**

One factor that is critical to the capacity of programs to relate closely to individual employers is the existence of a coordinator who has been trained for the role⁴². Figure 10 shows that the proportion of students in a program that has a coordinator who has been trained for the role ranges from a low of only around one in two in four States (Queensland, South Australia, Victoria and the Australian Capital Territory) to a high of over nine in ten in Tasmania.

Figure 10

Per cent of students in programs with a trained coordinator



⁴² The recent Tasmanian report referred to in the previous footnote comments that it is the program coordinator, rather than the college, that generates commitment to the program on the part of employers.

6. What vocational credit do students receive?

◆ The level of accreditation

One measure of the recognition that students can gain from school-industry programs is the level within the Australian Qualifications Framework at which they are accredited. This can be an indication of the level of skill or competence that students are able to develop through the programs as well as of the level of the qualification that programs might lead to. The 1997 McGaw report on the New South Wales Higher School Certificate presents evidence on the AQF level of hospitality and metals and engineering school-industry programs in five States⁴³. Case studies of school-industry programs in three States for both of these industries as well as for office skills programs conducted by the ASTF early in 1997 contain similar information, but based upon a slightly different sample of programs. Table 4 summarises this information from both sources. It indicates that the level of recognition (and by implication of competence and qualification) that students can gain from school-industry programs in New South Wales and in Queensland is generally lower than can be gained from programs in comparable industry areas in Victoria, in Western Australia, and perhaps in the Australian Capital Territory. Whilst Tasmanian data is not reported by these sources, Tasmanian school-industry programs are generally accredited at AQF level 1.

Table 4: AQF level of school-industry programs

Industry area	NSW	VIC	QLD	WA	ACT
Hospitality (McGaw)	1	2	1	2	1&2
Hospitality (ASTF)	1	2	-	2	-
Metals and Engineering (McGaw)	1	2	1	2	2
Metals and Engineering (ASTF)	1	2	-	1	-
Office (ASTF)	1	2	-	2	-

◆ National modules gained

Another measure of the level of industry recognition that students can gain is the number of national modules that programs typically lead to. This is also a measure of the potential amount of credit that students are able to gain in apprenticeships, traineeships and TAFE. The sources used to compile Table 4 also contain information on the number of national modules to which the

⁴³Note that this refers to the AQF level of the modules within the programs, rather than to the level of the qualification that students can gain. The distinction is important given that in most States students do not gain a complete TAFE or VET qualification from school-industry programs.

programs typically lead. It appears that in most instances students will gain substantially more national modules from school-industry programs in Western Australia and in Victoria than they will gain from programs available in comparable industry areas in New South Wales and in Queensland (Table 5). In South Australia and in the Australian Capital Territory the picture of relative advantage is less clear cut. McGaw comments that these differences appear to be related both to differences in the total length of the programs in hours and to differences in the length of the mandated workplace component.

Table 5: Number of national modules to which school-industry programs lead

Industry area	NSW	VIC	QLD	WA	SA	ACT
Hospitality (McGaw)	19-25	26-32	14-16	29+	10	14-17
Hospitality (ASTF)	14-19	30	-	29	-	-
Metals and Engineering (McGaw)	4	15	4-6	24+	16	9
Metals and Engineering (ASTF)	9	15	-	18	-	-
Office (ASTF)	10-17	17	-	32	-	-

◆ Apprenticeship and traineeship credit

The formal arrangements for granting advanced standing in apprenticeships and traineeships from school-industry programs vary widely from State to State. In New South Wales some credit towards the term of indentures has been centrally negotiated in a limited number of cases, and centrally negotiated arrangements appear to exist in Victoria and Tasmania as well. In Queensland and Western Australia students must use their exit statements from the school and/or their log books to negotiate individually for credit.

Whatever the formal nature of such agreements, it does not appear that they are well understood within schools. Table A13 shows the per cent of students found in school-industry programs reporting that they lead to credit or advanced standing in apprenticeships and traineeships. Only in Tasmania and the Australian Capital Territory are a majority of students in programs which report that credit is granted towards traineeships. In most States programs are as likely or more likely to be uncertain about credit than they are to indicate that it is granted. In the case of apprenticeships the proportion of students in programs where credit and advanced standing arrangements are uncertain is generally somewhat lower than in the case of traineeships.

Nevertheless the proportion of students indicated as being eligible for apprenticeship or traineeship credit is in many instances inherently implausible, as around half of all students nationally are in programs that do not focus upon specific industry or occupational areas. In addition only a low proportion of students are in courses that appear to be in industry or

occupational areas that have clear relationships to apprenticeships. With only nine per cent of all students in programs that cover the automotive, building and construction, electronics, metals and manufacturing industries (Table A2) it seems unlikely that 34 per cent are in programs (Table A13) that lead to credit in an apprenticeship.

◆ Vocational qualifications

It is common, but not universal, for students in school-industry programs to be able to be eligible for a full TAFE or VET qualification in Victoria and Tasmania. Full certificates are able to be awarded only occasionally in Queensland, New South Wales and the Australian Capital Territory, with a partial qualification in the form of advanced standing or credit being the more common outcome both there and in other States. Nevertheless nearly half or more of all students are reported to be in programs that lead to a full certificate in all States other than South Australia.

In Victoria the proportion of students reported to be able to gain a full VET or TAFE certificate closely approximates the proportion of students in programs that lead to such an award. In other States, where the award of a full certificate is not common, it would appear that considerable misunderstanding exists about the nature of the vocational qualifications to which school-industry programs lead.

Table A13 shows that students are more commonly believed to be eligible for advanced standing in a TAFE or VET course than for a full certificate, which generally reflects the reality that students face. Nevertheless there is wide variation between the States here as well. Eight in ten or more of students in Western Australia, the Australian Capital Territory and the Northern Territory are reported to be eligible for advanced standing in TAFE, compared to only four in ten in South Australia and one in two in Queensland.

◆ Other forms of recognition

Industry recognition can also take the form of a certificate issued by an industry body such as an ITAB, or by an industry association such as the Australian Hospitality Review Panel. It can also take the form of a certificate issued by a local or regional employer body such as a Chamber of Commerce. This form of industry recognition is relatively uncommon, but nevertheless its incidence differs widely between the States. Less than one in ten students in Victoria and Queensland are in programs that lead to a certificate awarded by an industry body, compared to nearly one in two in the Northern Territory. Two per cent of students in Queensland and none in the Australian Capital Territory are in programs where a local or regional body awards successful students a certificate. In Tasmania and Western Australia around one in five to one in six students are in such programs. These figures suggest wide differences in the degree to which particular programs are closely connected to industry, either on a State-wide basis or locally.

7. How well do programs fit into schools and school systems?

◆ Schools

While school-industry programs have a number of features that distinguish them from other school courses, their most distinguishing feature is that a proportion of the learning takes place outside of the school, in the workplace. Thus the ease with which work placements are accommodated is a critical test of the ease with which the programs as a whole are accommodated by schools. This can be examined in several ways. One is to look at the extent to which students are able to do their work placements within school time rather than having to do them in their own time (after school, at weekends or during holidays).

It is fairly common for students to split their work placements between normal school time and their own time, with around 40 per cent or more of all students in all States doing so (Table A14, row 3). However only in Victoria do a significant proportion - over one in five - of students undertake their work placements entirely in their own time⁴⁴ (Figure 11), despite the fact that on average work placements in Victoria tend to be relatively short (see Figure 5). This does not seem to be the result of industry requirements for placements to occur out of normal school hours. In part this is because it is inherently implausible that any such requirements would differ so much between Victoria and other States, but also because the proportion of Victorian students who do their work placements entirely in their own time is lower in industries that experience marked seasonal fluctuations in demand for labour and high peaks in demand for labour out of school hours, than it is in industries that do not have such patterns of demand for labour. For example only 33 per cent of Victorian students in hospitality VET in Schools programs and 30 per cent in retail programs do their work placements entirely in their own time, compared to 49 per cent of all office and clerical students and 45 per cent of those in metals and engineering programs⁴⁵.

Where work placements do take place during school time, other indications of the ease with which schools accommodate them are whether or not the timetable is modified so that students avoid having to miss other classes in order to take part in work placements, and if classes are missed, whether the

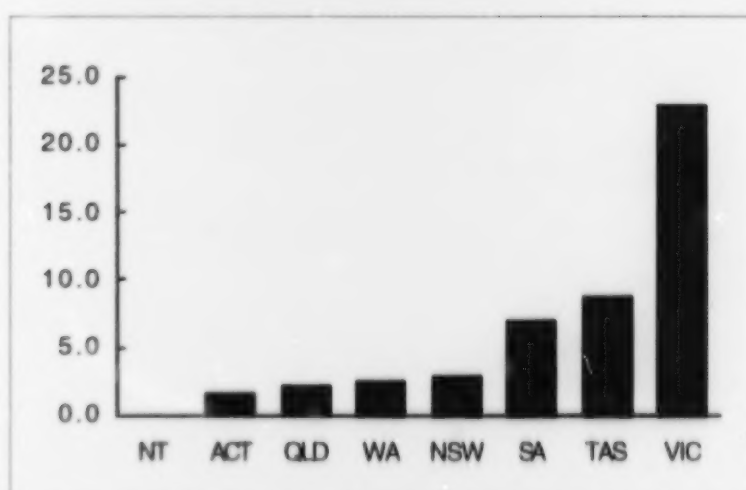
⁴⁴ This is almost entirely restricted to students in the officially endorsed VET in Schools courses. One in three of such students do their work placements entirely in their own time, compared to only three per cent of students in all other Victorian school-industry programs.

⁴⁵ Sweet, R. *How Well Does the VCE Accommodate Vocational Education and Work Placements?* Sydney: Dusseldorp Skills Forum, 1997.

school makes arrangements to minimise the number that are missed⁴⁶. It seems to be more common than not for students to have to miss other classes to attend work placements, with only somewhere between a third and a half of all students in most States missing no classes. In the Northern Territory schools appear to make the greatest effort to avoid students missing classes, with nearly three students in four missing none. On the other hand New South Wales schools appear to make the least effort, as only one student in six in that State misses no classes in order to attend work placements.

Figure 11

Per cent of students undertaking work placements entirely in their own time



The fact that 54 per cent of Victorian students miss no classes needs to be seen in the context of 23 per cent of students having to do their placements entirely in their own time. A clearer picture of the extent to which schools accommodate work placements within the timetable in each State is provided by separately analysing schools' responses for students who do work placements entirely on normal school days and for students who split them between school time and their own time. Table 6 shows the outcomes of such an analysis.

⁴⁶ Recent case studies of schools in which significant proportions of students are involved in school-industry programs show that all restructured their timetable to allocate one day per week for senior students' work placements. (Cumming, J. and Carbines, B. *Reforming Schools Through Workplace Learning*. Sydney: National Schools Network, 1997.)

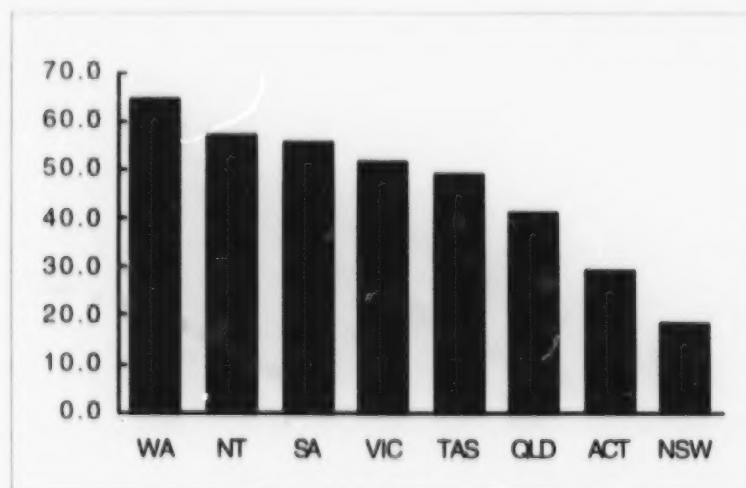
Table 6: Organisation of work placements and school timetable arrangements

	NSW	VIC	QLD	SA	WA	TAS	ACT	NT	AUS
Per cent of students whose work placements occur only on normal school days and who miss:									
Normal classes	66.1	22.3	49.2	26.4	25.1	15.3	46.0	32.1	47.2
Some classes but the number is minimised	15.5	26.1	9.9	18.3	10.5	35.7	24.7	10.7	14.9
No classes	18.4	51.6	40.9	55.3	64.5	49.0	29.3	57.1	37.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Per cent of students whose work placements occur both on normal school days and during their own time and who miss:									
Normal classes	51.8	13.1	27.2	24.8	38.4	40.1	6.9	0.0	36.7
Some classes but the number is minimised	36.1	52.9	36.3	37.2	32.5	42.2	19.9	10.5	37.3
No classes	12.1	34.0	36.6	38.0	29.1	17.7	73.2	89.5	26.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

The per cent of students in each State doing their work placements only on normal school days, on a combination of normal school days and their own time, and entirely in their own time is shown in rows 2, 3 and 4 of Table A13.

Figure 12

Per cent of students whose work placements occur only on normal school days and who miss no classes to attend work placements



The proportion of students whose work placements occur only on normal school days but who nevertheless have to miss classes in order to take part in work placements ranges from a high of 66 per cent in New South Wales to a low of 15 per cent in Tasmania. Conversely fewer such students in New South Wales than in any other State (18 per cent) miss no classes in order to take part in work placements.

The picture that emerges from this analysis of New South Wales schools being the most resistant to timetable modifications in order to accommodate work placements emerges again when those students who divide their work placements between normal school days and their own time are examined. 52 per cent of such students in New South Wales miss some classes to take part in work placements and only 12 per cent miss none.

◆ School systems

Whatever guidance and advice is provided by central agencies, the timetable is essentially a matter for individual schools to organise. Other features of school-industry programs such as accreditation and recognition arrangements are basically set down by central school authorities, or are determined by the frameworks established in each State for senior school certificates.

One fairly basic measure of the ease with which school-industry programs fit into the normal operation of school systems is whether or not they form part of students' "normal" school subjects or sit outside of them as an additional requirement. Table A13 shows that using this criterion they appear to fit fairly uneasily into schools and school systems in at least four States. In Queensland and Tasmania nearly 40 per cent of students are reported to be in programs that are an addition to normal subjects, and in Victoria and South Australia over half are reported to be. In the Australian Capital Territory and the Northern Territory on the other hand only one in twenty and one in nine students respectively are reported to be in programs that are additional to their normal school subjects.

Inclusion of students' results on senior school certificates is another fairly direct measure of how effectively school systems accommodate school-industry programs. On this measure they appear to be most readily accommodated by the Tasmanian and Australian Capital Territory school systems, with more than ninety per cent of students in these States reported to have their school-industry program results recorded on their Year 12 certificate. Using the same measure they appear to be least well accommodated in Queensland (44 per cent) and Victoria (63 per cent).

A variant on the above measure is whether the workplace learning component of programs is assessed and counts towards the student's school course. In six of the eight States three quarters or more of students are reported to have their workplace learning both assessed and counted towards their Year 12 certificate. However in Victoria this applies to only 59 per cent of students and in Queensland to only 66 per cent. This relative difficulty that

Victorian programs report in having their students' workplace learning count for purposes of that State's senior school certificate is ironic given that over three quarters of all Victorian students are reported as having their workplace learning counted towards a TAFE or VET certificate in Victoria (Table A11)⁴⁷. Victoria and the Australian Capital Territory are the only States in which the VET system seems more likely to recognise the workplace learning that occurs in school industry programs than does the school system itself.

A final indication of the ease with which school-industry programs fit into senior schooling arrangements in each State is the ease with which they are accessed equally by Year 11 and Year 12 students. Table A14 shows that the proportion of Year 12 students in school industry programs is lower in Victoria and South Australia than in other States. To some extent this reflects the recency of many school-industry programs in these two States, with many having commenced only in 1996. However that is not the full story. Even when only those programs commencing prior to 1996 are examined, the proportion of Year 12 students in school-industry programs in Victoria and in particular in South Australia is substantially lower than would be expected on the basis of Year 12 students' share of all senior school enrolments in those States (see the row (c) in Table A15). In Victoria Year 12 students represent only 27 per cent of those in such programs but 46 per cent of the senior school cohort. In South Australia they account for only 8 per cent of those in such programs but 43 per cent of the senior school cohort.

There are two possible explanations for this under-representation of Year 12 students. The first, which could apply to those programs lasting for one year or less, is that students are willing to enrol in them in Year 11 but reluctant to commence them in Year 12, whether because of the impact of the time that needs to be devoted to them upon their chances of university entry⁴⁸ or for some other reason. In all States except Tasmania and the Australian Capital Territory Year 12 students are under-represented in school-industry programs of a year's duration or less.

However the reluctance of Year 12 students to take shorter school-industry programs of a year or less in duration is particularly marked in South Australia and Victoria, where less than one student in ten in these shorter programs comes from Year 12, compared to one student in two in Tasmania

⁴⁷ 69 per cent of VET in Schools students were reported to have their workplace learning counted towards their school course compared to 96 per cent who were reported to have it counted towards a vocational certificate. However only 28 per cent of students in other Victorian programs were reported as having their workplace learning counted towards their school course and only 23 per cent as having it counted towards a vocational certificate.

⁴⁸ In *Shaping Their Future*, his March 1997 review of the New South Wales Higher School Certificate, McGaw shows that whereas 24 per cent of students take some vocational studies in either Year 11 or Year 12, only 18 per cent take some in Year 12, and only 11 per cent of those with a TER eligible pattern of subjects take some vocational studies. Like Victoria New South Wales offers school-industry programs of widely varying length.

and the Australian Capital Territory (Table A14, row (a)-(e)). In South Australia and Victoria a reluctance on the part of Year 12 students to take shorter programs is certainly one of the significant factors operating to reduce Year 12 students' overall participation in school-industry programs. It is likely that this has something to do with the role that university entry requirements play in shaping students' subject choices in Year 12 in these States compared to other States.

Another explanation for the under-representation of Year 12 students in school-industry programs could be that, where programs of two years duration are available, as in the case of Victoria's VET in Schools courses, students commence them in Year 11 but are more likely to drop out of them in Year 12 as the pressure to meet university entry requirements mounts⁴⁹. If this were the case Year 12 students would be expected to be under-represented in two year programs, compared to their share of total senior schooling enrolments, once the impact of programs commencing in 1996 had been controlled for.

Table A14 (row (a)-(d)) suggests that such under-representation occurs to a greater extent in Victoria than in the three other States - New South Wales, Queensland and Western Australia - where enrolments in two year programs that commenced before 1996 were, as in Victoria, fairly large (450 or more) in 1996. In Victoria the gap between Year 12 students' share of enrolments in two year programs that commenced prior to 1996 and their share of total Year 11 and 12 enrolments was two and a half times as great as in New South Wales and over three times as great as in Queensland. In Western Australia Year 12 students' share of enrolments in two year programs that commenced prior to 1996 was equal to their share of total Year 11 and 12 enrolments.

⁴⁹ A closely related factor in Victoria is that VET modules cannot be counted towards more advanced level VCE Units 3 and 4, but only towards VCE Units 1 and 2. The TER on the other hand is calculated from study scores for Units 3 and 4 studies.

8. What accounts for the differences between States?

No doubt some of the differences between the States that have been observed here owe much to differences in understanding that schools and teachers have of the most effective ways to organise vocational learning for their students, and much to the varying strengths of the case that employers and their representatives have made to schools and to school systems for doing things differently. But many of the differences, and in particular those that relate to the level and quality of students' outcomes, owe far more to the absence or inappropriateness of central guidelines and policies, or to differences between the views that central agencies take of the frameworks within which programs operate and the reality of program operation at the level of schools. School systems and Boards of Studies have in many instances either failed to encourage good practice through the policies, guidelines and procedures that they have developed, or they have developed policies, guidelines and procedures that encourage, even if unwittingly, less than optimal practices.

Such policies, guidelines and procedures, as well as adequate resourcing, are essential in a process that in essence involves changes to the culture of schools and of firms to bring about new ways of developing young peoples' competence and of enhancing the productivity of firms. If left to themselves schools will have a natural tendency to fall back on traditions of classroom delivery, teacher control and school ownership. Changing these mind sets requires both the leadership and encouragement and the prescriptions that it is pre-eminently within the role of central agencies to provide.

For example schools have been able to offer courses that require either no work placements, or work placements that involve only observation and experience rather than structured training, because State curriculum frameworks allow such courses and central authorities provide resources for them. Contact with the workplace is low, and weak, in States that have not set the goal posts high for individual schools. Resourcing instructions emanating from central authorities, such as those in New South Wales that require those on work placements to be counted as part-time students and thus to be discounted in schools' staffing formulae, provide a strong disincentive to schools who might wish to strengthen the workplace components of courses. Where the goal posts have been set high, schools have responded with minimum fuss.

The mismatch between course provision and employment opportunities in many although not all instances is an outcome of central curriculum bodies not ensuring an adequate span of courses or programs. New South Wales has enrolments in construction industry courses that closely match the proportion of teenagers employed in construction in large part because it has a construction course as one of its centrally designed school-industry courses.

It has almost no students enrolled in automotive school-industry courses because such a centrally designed school-industry course does not exist.

Drop outs between Years 11 and 12 appear high in Victoria and in other States in large part because of the constriction that university entry requirements impose upon the choice of vocational subjects, and because of the demands that assessment requirements phrased largely in terms of university entry make upon the time of students.

Student outcomes, in terms of the levels of the national modules that can be gained, are low in Queensland, Tasmania and New South Wales because the courses have been constructed so that they will lead to these lower outcomes. The preponderance of enrolments in short, one semester courses in South Australia greatly limits the depth of knowledge and skill that can be developed through school-industry programs in that State. Other State systems such as Victoria and Western Australia have aimed higher in constructing courses or programs.

This is not to say that there are no matters that impact upon quality and outcomes that are primarily the province of the school. Recent case studies in three States of schools that have achieved high rates of participation in workplace learning show that even in States with less than adequate central frameworks, schools are able to achieve significant gains. But in some cases they do so either despite or with little active support from central school systems⁵⁰.

School timetables that can facilitate workplace learning are a good example of arrangements that substantially lie within the province of the school and that can have an enormous impact upon the quality of students' outcomes. But even these occur within State resourcing and policy frameworks that can make the difference between achieving change in the interests of students easily or achieving change only in the face of great difficulties. Victoria is a case in point, where the nature of the VCE is such that 23 per cent of students must do their work placements entirely in their own time, and over a third of school-industry program students appear not to have their results recorded on their senior school certificate.

The effectiveness of credit transfer and advanced standing arrangements is another example of something that in large part depends upon local initiatives to ensure adequate linkages and communication between schools, colleges and employers once central frameworks have been put in place. In both of these instances central authorities can encourage and assist if they have a vision of what is possible, and a desire to bring it about.

⁵⁰ Cumming and Carbines, 1997, *op. cit.*

9. To what extent should the differences be reduced, and how?

In almost every facet of the organisation and delivery of school-industry programs sharp differences between the States are evident. Differences exist in the way in which students' needs have been interpreted and built into program frameworks; in arrangements for accreditation, certification and recognition; in assessment; in the effectiveness with which programs fit into the operation of schools and school systems; and most importantly in the ways in which and in the extent to which the workplace is involved.

Not all of this diversity is to be decried, as it can allow the opportunity to learn, to experiment, and to improve practice. Nor need some forms of diversity matter. For example the fact that arrangements for advanced standing in TAFE, apprenticeships and traineeships differ from State to State would be immaterial as long as the arrangements were effective, and were clearly understood by students, employers, schools and TAFE colleges.

Other forms of diversity seem harder to justify. Examples include variation in the number and level of national modules arising from courses in the same industry area in different States, wide variation in the typical length of programs, and variation between States in the extent and quality of learning and assessment that occurs in workplaces. These make little sense on the basis of the needs of young people for skills, on the basis of the needs and preferences of employers, or on the basis of available job opportunities for young people. Rather than sensible experimentation and flexibility in response to differing needs, such diversity could more reasonably be characterised as the outcome of poor national planning and lack of effective coordination between the States and industry.

At best such differences are likely to result in confusion for students and for employers, and at worst they help to maintain and promote low quality options. The diversity of approaches both within and between the States shows that there is no great clarity of purpose either about vocational education within senior secondary schooling, about workplace learning as a component of it, or about quality standards in school-industry programs.

Section 1 of this report outlines a range of international and Australian evidence on measures of good practice and on indicators of quality in the delivery of programs that involve links between schools and workplaces. These measures and indicators relate heavily to the nature and quality of the relationship between schools and employers, to the quality of workplace learning and assessment, to the ways in which programs fit into schools, and to program management processes. A wide range of indicators of the quality of school-industry programs have been discussed in this report on the basis of analysis of data gathered in the 1996 ACER national survey of school-industry programs. These include differences between the States in the level and depth

of courses, the nature and intensity of workplace involvement and the effectiveness with which programs fit into the operation of schools.

Rather than attempting to arrive at judgements about the overall quality of school-industry programs within a State on the basis of any single measure, it seems more helpful to arrive at judgements on the basis of broader indicators that summarise a variety of evidence. One approach that seems to work fairly effectively in summarising the wide range of evidence reviewed here is to look separately at the fit that is reported between school-industry programs and: the workplace; the operation of schools; school systems; and the vocational education and training system

- **The workplace fit** is exemplified by the extent to which employers play a role in selecting and assessing students and in managing programs, by the length of time that students spend in the workplace and by the extent to which this time is used for structured training and its outcomes are assessed.

On this basis school-industry programs appear to fit most effectively into the workplace in the Northern Territory and Tasmania and least effectively in New South Wales and South Australia.

- **The fit with the operation of schools** is exemplified by the ease with which school timetables are reported to accommodate work placements.

On this basis school-industry programs appear to fit most effectively into the operation of schools in the Northern Territory and the Australian Capital and least effectively in Victoria and New South Wales.

- **The fit with school systems** is exemplified by the extent to which programs and their workplace learning are reported as being recognised on senior school certificates and treated as standard senior school subjects.

On this basis school-industry programs appear to fit most effectively into school systems in the Australian Capital Territory and the Northern Territory and least effectively in Victoria and Queensland.

- **The fit with the vocational education and training system** is exemplified by the perceived link to the formal VET system through credit transfer or certification arrangements.

On this basis school-industry programs appear to fit most effectively into the vocational education and training system in the Northern Territory and the Australian Capital Territory and least effectively in South Australia and Queensland.

Whilst all four of these broad indicators are important, the international and Australian evidence reviewed in Section 1 would suggest that the first two play a larger role in influencing program quality than the latter two.

The above thumbnail picture suggests that opportunities for and directions of quality improvement will vary from State to State. In this context it is clear that opportunities for reform are in the wind in many States. South Australia has recently adopted its Ready, Set, Go! policy that allocates resources to strengthening the quality of its programs by, among other things, increasing opportunities for national VET qualifications to be gained as part of the South Australian Certificate of Education, strengthening local links between schools and employers, and increasing students' opportunities to become involved in extended periods of work placement. In Queensland the Board of Studies is currently conducting a review of its vocational education provision as a result of the August 1996 Cumming report on post-compulsory school education. In the Australian Capital Territory E Courses are being phased out in favour of VET courses based upon national standards. New South Wales has the opportunity to improve the quality of its programs as a result of the McGaw Review's recommendation for a rationalisation of the multiplicity of vocational education courses to bring them into a single and more coherent framework. In Victoria a review of the VCE is currently being undertaken by a committee chaired by Professor Kwong Lee Dow of Melbourne University.

Much of the growth of vocational education in upper secondary school has occurred as a reaction by the States to local initiatives⁵¹, rather than as part of a coherent strategy jointly developed by employers and schools to reform and improve the ways that young people are prepared for work and the ways that firms recruit their young workers. As a consequence the interests, preferences and territorial imperatives of education authorities have often been the major factors determining the way that workplace learning programs are arranged, managed and assessed, rather than the interests and needs of students and employers.

The practice of State education authorities establishing workplace learning models to suit their own circumstances and traditions, rather than the needs of students and employers, sits at odds with the commitment of all States to the development of an "industry driven" national system of vocational education and training. At least one practical manifestation of this commitment to a national industry driven system ought to be a reduction in diversity between the States, in recognition of the substantial extent to which labour market and employment realities are common across State borders. A reduction in unnecessary diversity also makes sense in light of the

⁵¹ Keating, J. Schools and the workplace - The policy framework. in *Structured Work Placements: Using Research and Policy to Improve Outcomes*. Sydney: Australian Student Traineeship Foundation, 1996.

commonality between the States in the nature of young peoples' needs for skills and qualifications at the point of the transition from school to work.

Despite present opportunities for reform within individual States, a common vision, an agreed approach to minimum standards and a common commitment to quality are unlikely to emerge if the States are left to their own devices. Both vocational education in schools and school-industry programs are matters in which the Commonwealth has a clear interest and clear responsibilities by virtue of its national role in economic and labour market policy formulation and implementation. It has the opportunity through direct leadership, through policy development, and through direct financial leverage to assist in bringing about a reduction in those forms of diversity that adversely affect quality and outcomes.

It now seems an appropriate time to take stock of the differences that have emerged within and between the States in the ways that school-industry programs are being approached, to assess the extent to which these genuinely reflect the needs of students and industry, and to use such a stock take to build a common national commitment to standards and quality in school-industry programs that serves the interests of young people and employers. In working towards minimum quality criteria, the intent should be to achieve consistencies that achieve quality outcomes for students and employers, such that the system is transparent, simple and effective, without requiring uniformity for its own sake. The following are suggested as a starting point for the establishment of minimum quality criteria for school vocational education courses and programs:

- A consistent approach to the value of **all** vocational education courses and programs within each State that gives guidance on matters such as course length, work placement length and the uses to which workplace time should be put, based around a limited number of programs in broad industry or occupational areas and providing continuity of study over Years 11 and 12;
- The incorporation of a minimum of 120 hours of structured workplace learning over the course of a year;
- The delivery of recognised competencies within the Australia Qualifications Framework that lead to vocational education and training qualifications;
- Programs that are of a length and depth that are sufficient to provide vocational certificates at level 1 within the AQF as a minimum;
- The formal assessment of both workplace and classroom-based learning, and the incorporation of the outcome of these assessments within both school and vocational education certificates;
- Employer involvement in program management at the local or district level;

- Qualifications and experience for teachers delivering the school-based elements of programs or courses that are equivalent to those required of TAFE teachers who deliver courses of an equivalent level; and
- Appropriate resourcing of both the workplace and school-based components of courses or programs.

These criteria are neutral on the issue of how school-industry programs should relate to university entry. They focus on ways in which the overall quality of individual programs might be raised, rather than attempting the larger task of reforming senior school certificates. However they are not neutral on the issue of whether or not workplace learning should be mandated as part of schools' approach to vocational education. Some might argue that requiring workplace learning to be part of vocational education is unfair, as not all students will be able to access workplaces. However similar arguments are rarely put forward as a basis for urging the delivery of other forms of education without the resources needed to ensure a quality outcome. The example of Sweden demonstrates that 60 per cent of the senior school cohort can engage in extended workplace learning given appropriate partnership arrangements that emphasise strong local connections between teachers and employers, and appropriate resourcing by schools of coordinators to strengthen these connections and to provide quality control⁵². Case studies of Australian schools in which high proportions of Year 11 and 12 students undertake workplace learning provide the same message⁵³.

⁵² Hjorth, S. *Coherence Between Compulsory Education, Initial and Continuing Training and Adult Education in Sweden*. Stockholm: Swedish Ministry of Education and Science, 1994; Sweet, R. *Linking Schools and Workplaces. Lessons from Australia and Overseas*. Occasional Paper No. 1, Sydney: Australian Student Traineeship Foundation, 1995.

⁵³ Cumming and Carbines, 1997, op. cit.

APPENDIX

Figures

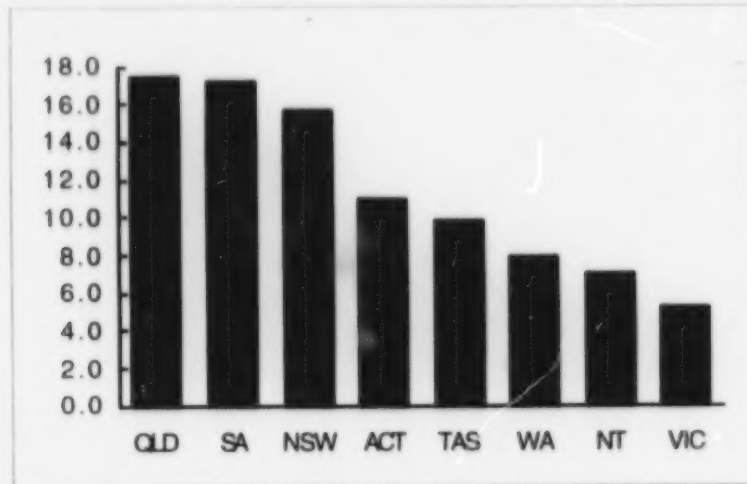
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Figure A1

Per cent of Year 11 and 12 students participating in school-industry programs in 1996¹



¹Nationally 12.2 per cent of Year 11 and 12 students were involved in school-industry programs in 1996

Table A1: Distribution of students by course type (per cent)¹

Course type	NSW	VIC	QLD	SA	WA	TAS	ACT	NT	AUS
Work experience	10.7	22.4	36.1	43.2	12.5	4.8	5.9	0.0	22.9
Externally initiated business partnerships	1.7	2.3	0.4	5.5	1.0	2.7	0.0	14.4	1.8
Transition education	0.4	0.6	0.1	0.7	0.5	1.0	0.0	0.0	0.4
Work Studies (NSW)	14.8	0.0	0.0	0.3	7.2	0.0	0.0	0.0	5.8
Work Education (Queensland, Tasmania)	0.1	0.0	25.0	4.9	0.0	19.8	0.0	0.0	8.2
Dual Recognition (Victoria)	0.4	61.0	0.1	2.4	0.7	0.0	30.1	0.9	8.5
Industry Studies, CEC (NSW)	58.5	1.0	1.2	0.0	0.0	0.0	0.0	0.0	21.4
TRAC	2.7	0.1	1.2	5.1	0.8	35.4	1.9	29.7	2.9
INSTEP	0.0	0.0	0.0	0.0	33.6	0.0	0.0	0.0	2.5
Work experience, external or transition - mixed	4.5	1.2	2.5	9.0	3.9	0.0	0.0	0.0	3.8
Work Studies plus CEC (NSW)	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2
Other	2.9	11.4	33.4	29.1	39.8	36.2	62.1	55.0	20.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Estimated numbers ²	17,610	5,110	12,210	4,560	3,480	900	1,160	190	45,200

¹Entries in some cells suggest either error on the part of respondents (for example 1.2 per cent of Queensland students are indicated as being enrolled in New South Wales courses), unreliability in reporting as a result of students who are resident in one State yet studying in another, or that the questionnaire was not readily able to accommodate the particular circumstances of some States (for example 30.1 per cent of students in the Australian Capital Territory are shown as enrolled in Victorian Dual Recognition courses).

However the overall impact of such factors is likely to be slight, as the total number of students who might have been incorrectly classified in this way represents less than two per cent of the total.

²The figures on estimated numbers of program participants are taken from Table 10 of the ACER's report on its 1996 survey.

Table A2: Distribution of students by industry area (per cent)

Industry	NSW	VIC	QLD	SA	WA	TAS	ACT	NT	AUS
Single industry									
Agriculture, forestry etc	1.3	4.3	2.6	4.2	0.0	1.9	0.0	0.0	2.2
Arts, sport etc	0.1	0.2	0.1	0.0	0.0	5.6	1.2	0.0	0.3
Automotive	0.1	5.0	0.1	0.5	0.3	10.4	5.5	6.8	1.1
Building and construction	4.3	2.2	2.0	0.5	0.0	1.0	0.0	0.0	2.5
Health and community services	0.4	1.0	8.0	2.8	0.0	4.6	13.5	5.6	3.2
Hospitality	25.9	14.8	9.0	8.0	11.0	19.0	25.3	0.0	16.5
Electronics	0.5	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.5
Manufacturing	3.0	0.9	0.1	0.5	4.2	4.1	0.0	0.0	1.7
Metals and engineering	5.7	3.5	2.9	2.0	2.1	4.2	0.0	16.4	3.9
Office and clerical	5.1	19.8	12.7	5.4	5.5	12.2	36.7	4.0	9.8
Retail	5.8	3.5	0.4	10.0	0.8	9.1	1.9	5.1	4.1
Tourism	0.0	0.0	2.8	1.3	0.0	5.4	0.0	0.0	1.1
Other	0.3	2.2	1.5	1.7	1.9	2.7	8.4	0.0	1.3
Multiple industries	47.4	39.8	57.7	63.1	74.2	19.9	7.5	62.1	51.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table A3: Per cent of students in programs of different length, by industry

	NSW	VIC	QLD	SA	WA	TAS	ACT	AUS
Building and construction								
1 semester	0.0	-	2.6	-	-	-	-	1.3
1 year	10.8	-	3.6	-	-	-	-	10.4
1 or 2 years	11.0	-	0.0	-	-	-	-	8.5
2 years	78.2	-	93.8	-	-	-	-	79.8
	100.0	-	100.0	-	-	-	-	100.0
Hospitality								
1 semester	0.0	0.0	0.0	27.8	7.2	0.0	0.0	1.9
1 year	4.7	1.9	0.0	42.7	11.5	100.0	77.1	10.6
1 or 2 years	9.6	10.5	5.7	20.3	36.7	0.0	14.9	11.0
2 years	85.7	87.6	94.3	9.2	44.6	0.0	8.0	76.5
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Metals and engineering								
1 semester	0.0	0.0	0.0	-	-	-	-	0.4
1 year	1.7	2.9	0.0	-	-	-	-	7.3
1 or 2 years	0.0	0.0	0.0	-	-	-	-	3.8
2 years	98.3	97.1	100.0	-	-	-	-	88.5
	100.0	100.0	100.0	-	-	-	-	100.0
Office and clerical								
1 semester	0.0	0.0	1.4	87.7	0.0	-	0.0	6.1
1 year	18.3	6.5	0.7	3.3	8.6	-	0.0	8.7
1 or 2 years	22.8	12.0	3.8	9.0	51.4	-	22.1	13.1
2 years	59.0	81.5	94.2	0.0	40.0	-	77.9	72.1
	100.0	100.0	100.0	100.0	100.0	-	100.0	100.0
Retail								
1 semester	0.0	0.0	-	55.8	-	-	-	16.7
1 year	6.7	12.3	-	30.7	-	-	-	17.6
1 or 2 years	20.2	5.8	-	12.4	-	-	-	15.8
2 years	73.1	81.9	-	1.0	-	-	-	49.9
	100.0	100.0	-	100.0	-	-	-	100.0

Within any one industry States with less than 100 observations have been excluded

Table A4: Per cent of students undertaking short, mid length and extended work placements, by industry

	NSW	VIC	QLD	SA	WA	TAS	ACT	AUS
Building and construction								
1-10 days	45.4	0.6	32.3	-	-	-	-	37.5
11-19 days	3.8	32.3	12.6	-	-	-	-	9.0
20+ days	50.9	67.1	55.1	-	-	-	-	53.5
	100.0	100.0	100.0	-	-	-	-	100.0
Hospitality								
1-10 days	88.1	39.9	72.5	68.7	7.2	11.0	100.0	74.7
11-19 days	9.1	37.2	22.9	28.7	0.0	9.4	0.0	14.2
20+ days	2.7	23.0	4.5	2.6	92.8	79.5	0.0	11.1
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Metals and engineering								
1-10 days	85.1	9.0	45.6	-	-	-	-	61.2
11-19 days	12.1	33.0	38.7	-	-	-	-	21.1
20+ days	2.8	58.0	15.7	-	-	-	-	17.7
	100.0	100.0	100.0	-	-	-	-	100.0
Office and clerical								
1-10 days	83.7	79.5	85.5	66.0	0.0	-	93.6	76.6
11-19 days	7.0	12.1	11.1	17.9	12.1	-	6.4	10.3
20+ days	10.2	8.5	3.4	16.0	87.9	-	0.0	13.1
	100.0	100.0	100.0	100.0	100.0	-	100.0	100.0
Retail								
1-10 days	74.6	0.0	-	73.1	-	-	-	62.6
11-19 days	14.3	2.4	-	0.0	-	-	-	8.1
20+ days	9.1	97.7	-	30.8	-	-	-	29.2
	100.0	100.0	-	100.0	-	-	-	100.0

Within any one industry States with less than 100 observations have been excluded

Table A5: Per cent of students in programs in which workplace learning is assessed formally, by industry

	NSW	VIC	QLD	SA	WA	TAS	ACT	NT	AUS
Building and construction	66.4	-	14.9	-	-	-	-	-	55.4
Hospitality	65.9	69.3	63.9	84.9	90.3	100.0	92.0	-	69.8
Metals and engineering	61.5	93.4	62.0	-	-	-	-	-	65.0
Office	54.7	80.5	78.5	88.7	100.0	-	56.6	-	74.4
Retail	74.4	83.1	-	90.8	-	-	-	-	82.2

Within any one industry States with less than 100 observations have been excluded

Table A6: Per cent of students in programs in which a competency log book is used to record workplace learning, by industry

	NSW	VIC	QLD	SA	WA	TAS	ACT	NT	AUS
Building and construction	95.4	-	31.3	73.7	-	-	-	-	77.2
Hospitality	93.2	78.3	67.7	90.5	97.3	88.9	85.1	-	87.4
Metals and engineering	71.2	91.9	69.7	64.1	-	-	-	-	75.0
Office	92.1	87.6	95.4	85.8	100.0	-	83.5	-	91.8
Retail	95.8	100.0	-	98.6	-	-	100.0	-	97.4

Within any one industry States with less than 100 observations have been excluded

Table A7: Per cent of students in programs in which workplace learning is assessed by a workplace supervisor, by industry

	NSW	VIC	QLD	SA	WA	TAS	ACT	NT	AUS
Building and construction	55.1	-	29.6	-	-	-	-	-	55.5
Hospitality	60.6	70.6	84.1	90.4	100.0	91.3	16.2	-	68.5
Metals and engineering	62.2	100.0	100.0	-	-	-	-	-	78.0
Office	65.9	84.7	94.6	98.9	100.0	-	77.4	-	87.2
Retail	48.9	100.0	-	88.0	-	-	-	-	70.5

Within any one industry States with less than 100 observations have been excluded

Table A8: Per cent of students assessed in three locations, hospitality and office and clerical industries

	NSW	VIC	QLD	SA	WA	TAS	ACT	AUS
Hospitality								
Work	7.8	38.8	14.5	48.5	52.4	26.0	16.2	18.3
School	22.6	3.5	13.3	3.9	0.0	0.0	0.0	15.0
Both	69.6	57.8	72.2	47.6	47.6	74.0	83.8	66.8
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Office and clerical								
Work	28.1	35.5	58.5	43.6	71.4	-	30.5	44.7
School	17.7	9.7	1.0	0.0	0.0	-	0.0	5.5
Both	54.2	54.8	40.5	56.4	28.6	-	69.5	49.8
	100.0	100.0	100.0	100.0	100.0	-	100.0	100.0

Cell numbers for other industries are too small for reliable comparisons

Table A9: Distribution of 15-19 year old employment by industry, February 1997 (per cent)

Industry	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	AUS
Agriculture, Forestry and Fishing	4.1	6.2	4.3	8.4	5.9	5.4	3.7	0.9	5.2
Mining	0.2	0.1	0.4	0.4	1.0	1.4	0.0	0.9	0.4
Manufacturing	8.5	9.2	8.0	9.5	10.1	11.6	5.6	2.8	8.8
Electricity, Gas and Water Supply	0.2	0.6	0.0	0.0	0.1	1.4	1.9	0.0	0.3
Construction	5.2	3.2	4.4	3.3	5.3	6.1	9.3	1.9	4.4
Wholesale Trade	3.6	2.8	4.5	4.0	5.2	4.8	1.9	1.9	3.8
Retail Trade	49.4	51.4	48.4	46.7	42.6	40.8	50.0	58.9	48.6
Motor Vehicle Retailing and Services	5.5	3.7	4.2	4.4	5.6	4.8	13.0	0.9	4.7
Accommodation, Cafes and Restaurants	9.8	7.8	12.3	11.1	7.7	8.8	9.3	4.7	9.6
Transport and Storage	1.1	1.6	1.7	1.8	1.5	1.4	0.0	0.0	1.4
Communication Services	0.4	0.4	0.6	0.0	0.6	0.7	0.0	0.9	0.4
Finance and Insurance	2.6	1.0	0.5	0.9	2.1	0.7	1.9	1.9	1.6
Property and Business Services	6.4	4.2	5.5	3.5	6.7	6.1	0.0	7.5	5.5
Government Administration and Defence	0.0	0.9	1.5	0.4	0.7	0.7	3.7	1.9	0.7
Education	0.9	1.7	0.9	1.1	1.3	2.0	0.0	2.8	1.2
Health and Community Services	1.2	2.9	2.8	4.2	3.4	1.4	5.6	3.7	2.5
Cultural and Recreational Services	2.4	3.0	2.6	1.3	2.1	3.4	1.9	3.7	2.5
Personal and Other Services	4.0	2.9	1.7	3.1	4.0	3.4	7.4	6.5	3.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: ABS *The Labour Force Australia*, Cat. No. 6203.0, unpublished tables.

Table A10: Distribution of 15-19 year old employment by occupation, February 1997 (per cent)

Occupation	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	AUS
Managers and Administrators	0.5	0.2	0.4	2.2	0.6	0.0	0.0	0.0	0.5
Professionals	1.8	0.6	0.8	0.0	1.5	0.7	1.9	0.9	1.1
Associate Professionals	3.5	2.3	1.5	1.1	2.2	3.4	0.0	2.8	2.5
Tradespersons and Related Workers	13.9	12.9	13.2	12.4	16.4	17.0	20.4	10.3	13.8
Advanced Clerical and Service Workers	2.2	0.9	1.7	1.3	3.3	1.4	1.9	0.0	1.8
Intermediate Clerical, Sales and Service Workers	13.8	12.2	15.2	15.7	14.2	12.9	11.1	14.0	13.8
Intermediate Production and Transport Workers	9.7	5.4	6.4	10.8	6.7	8.8	5.6	5.6	7.6
Elementary Clerical, Sales and Service Workers	35.6	44.1	39.1	32.5	32.1	34.7	38.9	55.1	38.0
Labourers and Related Workers	19.0	21.3	21.5	24.1	23.1	21.8	20.4	12.1	20.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: ABS *The Labour Force Australia*, Cat. No. 6203.0, unpublished tables.

Table A11: School-industry program assessment indicators

	NSW	VIC	QLD	SA	WA	TAS	ACT	NT	AUS
Per cent of students in school-industry programs in which workplace learning is assessed:									
At all	63.0	62.0	53.9	65.9	78.0	93.5	70.6	77.9	62.7
By a school teacher	81.5	49.7	61.8	72.1	28.4	42.9	59.7	59.0	65.3
By a TAFE teacher	1.9	23.0	5.5	4.0	0.7	1.2	25.1	71.6	6.3
By a workplace supervisor	43.0	51.7	45.8	53.1	76.1	85.9	42.4	54.7	49.3
By a school teacher but not a workplace supervisor	29.7	12.1	14.6	18.6	2.3	8.1	32.2	1.5	19.5
By a workplace supervisor but not a school teacher	16.5	45.8	37.7	27.0	71.5	57.1	32.5	12.7	32.8
By both	51.8	37.6	47.2	53.5	26.1	34.8	27.5	57.5	45.8
In the workplace only	17.8	45.9	41.6	32.0	73.7	53.4	18.9	44.0	34.9
At school only	12.6	4.7	10.0	13.3	0.3	0.0	7.7	0.0	9.4
In both locations	69.6	49.4	48.4	54.8	26.1	46.6	73.4	56.0	55.7
Using a competency log book	89.3	83.5	77.9	72.1	92.7	91.3	79.8	91.0	84.2
Against agreed learning outcomes, rather than by using only a general report	68.1	62.3	70.7	57.8	57.8	74.3	84.0	66.4	66.5
And counts towards the students' school course	83.1	58.6	65.6	89.1	91.7	83.4	74.9	100.0	77.7
And counts towards a vocational certificate	71.0	76.8	59.9	49.4	46.9	74.1	87.1	100.0	65.3
Percentage difference	12.1	-18.2	5.7	39.7	44.8	9.3	-12.2	0.0	12.4

Table A12: Indicators of employer involvement in school-industry programs

Per cent of students in programs where:	NSW	VIC	QLD	SA	WA	TAS	ACT	NT	AUS
1. Workplace learning is assessed by a workplace supervisor	43.0	51.7	45.8	53.1	76.1	85.9	42.4	54.7	49.3
2. Workplace learning is assessed by a teacher but not a workplace supervisor	29.7	12.1	14.6	18.6	2.3	8.1	32.2	1.5	19.5
3. Workplace learning is assessed at school only	12.6	4.7	10.0	13.3	0.3	0.0	7.7	0.0	9.4
4. Trained supervisors exist in each work site	41.0	36.4	30.1	42.6	63.6	71.5	48.5	92.5	40.6
5. Employers help to identify students best suited to the program	14.8	32.1	19.1	17.4	42.6	64.5	5.1	45.8	21.2
6. The workplace time is used for structured learning	55.7	66.0	46.9	37.6	76.9	71.8	92.5	91.6	55.4
7. Students spend 20 days or more in the workplace each year	16.1	30.0	10.6	8.3	68.2	63.2	10.0	82.0	20.4
8. The program has a joint industry-education management group	30.0	47.8	40.1	39.6	33.4	86.9	58.0	91.0	38.4

Table A13: Per cent of students in programs that are reported to lead to various forms of vocational recognition

	NSW	VIC	QLD	SA	WA	TAS	ACT	NT	AUS
A TAFE or State Training Authority certificate	50.4	64.2	43.8	22.3	36.5	52.5	59.6	78.1	46.2
Credit towards a TAFE or other VET course:									
Yes	67.4	68.9	52.2	41.3	81.1	57.0	89.8	83.1	61.6
Uncertain	3.0	4.9	1.4	4.6	2.1	10.7	8.6	7.6	3.2
Apprenticeship credit:									
Yes	45.3	33.9	28.8	16.1	25.5	38.5	33.9	37.6	34.2
Uncertain	14.3	17.4	13.5	14.2	27.3	12.5	11.8	22.5	15.3
Traineeship credit:									
Yes	39.5	28.3	21.0	22.9	20.7	58.8	69.4	45.0	30.8
Uncertain	28.2	32.5	25.3	16.1	38.8	13.2	14.5	26.2	26.6
A certificate from an industry body	11.8	8.0	8.0	22.1	14.5	22.8	25.6	45.5	12.4
A certificate from a local or regional body	8.5	6.0	2.0	10.5	15.9	18.0	0.0	40.4	7.4

Table A14: Indicators of the ease with which school-industry programs are accommodated by schools and school systems

Per cent of students in programs where:	NSW	VIC	QLD	SA	WA	TAS	ACT	NT	AUS
1. The program is additional to students' normal school subjects	19.5	53.4	39.5	52.9	29.8	39.0	5.0	11.2	33.5
2. Work placements take place only on normal school days	46.6	37.1	60.1	56.1	50.9	29.7	51.7	51.1	50.6
3. Work placements take place both on normal school days and out of school time	50.7	40.1	37.7	37.0	46.6	61.6	46.8	48.9	44.1
4. Work placements take place only in students' own time	2.7	22.8	2.2	6.9	2.5	8.7	1.5	0.0	5.3
5. Students miss normal classes to attend work placements	58.6	13.6	41.0	23.3	30.1	28.8	24.6	15.9	40.9
6. Arrangements exist to minimise the number of classes missed	24.6	32.2	19.4	23.2	20.2	36.3	21.7	10.6	23.7
7. Students miss no classes to attend work placements	16.8	54.2	39.6	53.4	49.7	35.0	53.6	73.5	35.4
8. Results are recorded on students' Year 12 certificate	80.1	62.5	44.0	80.4	78.7	95.1	93.8	85.4	68.6
9. Workplace learning is assessed and counts towards the students' school course	83.1	58.6	65.6	89.1	91.7	83.4	74.9	100.0	77.7

Table A15: School-industry program participation by Year 12 students

NSW	VIC	QLD	SA	WA	TAS	ACT	NT	AUST
Year 12 students as a per cent of:								
(a) All Year 11 and 12 students ¹								
46.3	46.3	46.8	43.1	45.0	43.9	42.5	46.9	46.0
(b) All school-industry programs								
31.6	16.0	34.7	18.3	32.4	43.7	27.4	18.7	28.0
(c) School-industry programs commencing prior to 1996 ²								
37.2	26.5	44.8	7.6	37.5	-	-	-	9.7
(d) Two-year school-industry programs commencing prior to 1996 ²								
44.0	40.5	45.1	-	45.1	-	-	-	43.8
(e) School-industry programs of a Year or less in duration								
17.6	7.0	34.4	8.2	25.8	50.3	50.3	20.4	21.6
(a)-(b)								
14.7	30.3	12.1	24.8	12.6	0.2	15.1	28.2	18.0
(a)-(c)								
9.1	19.8	2.0	35.5	7.5	-	-	-	9.7
(a)-(d)								
2.3	5.8	1.7	-	-0.1	-	-	-	2.2
(a)-(e)								
28.7	39.3	12.4	34.9	19.2	-6.4	-7.8	26.5	24.4

¹Source: ABS *Schools Australia*, 1996 Cat. No. 4221.0

²States with small enrolments (under 450) in programs commencing prior to 1996 are excluded